SIXTY-FIRST ANNUAL CATALOGUE

OF THE

MEDICAL COLLEGE

OF

WESTERN RESERVE UNIVERSITY,

CLEVELAND, OHIO.

1904-1905.

CALENDAR.

1904.	
January 4th,	Exercises resumed.
May 23d,	Final examinations begin.
June 15th,	Alumni meeting.
June 16th,	Commencement.
September 29th and 30th,	Examinations for admission.
October 1st,	Session opens.
December 19th,	Holiday recess begins.
1905.	
January 5th,	Exercises resumed.
May 22nd,	Final examinations begin.
June 15th,	Commencement.

TRUSTEES.

CHARLES F. THWING, D. D., LL. D.
President. Cleveland
HIRAM C. HAYDN, D. D., LL D.,
Vice-President, Cleveland
WILLIAM H. UPSON, A. B., Akron
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EDWIN R. PERKINS, A. B., Cleveland
SAMUEL MATHER, A. M., Cleveland
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‡EDWARD P. WILLIAMS, A. M., Cleveland
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ALFRED A. POPE, Farmington, Conn
LOUIS H. SEVERANCE, New York
HENRY R. HATCH, Cleveland
WORCESTER R. WARNER, Cleveland
LEWIS H. JONES, A. M., Cleveland
WILLIAM D. REES, Cleveland
ANDREW SQUIRE, LL. D., Cleveland
CHARLES W. BINGHAM, A. B. Cleveland
CHARLES F. BRUSH, PH. D., LL. D. Cleveland
HORACE E. ANDREWS, A. B., Cleveland
GEO. A. GARRETSON, Cleveland
HARRY A. HARING, A. B., *Treasurer.*
Office in Adelbert College Building

‡ Deceased.

THE MEDICAL COLLEGE

GENERAL STATEMENT

THE Medical Department of the Western Reserve University was organized, in 1843, as the Cleveland Medical College, a branch of Western Reserve College. The first Faculty contained the names of Drs. John Delemater, Jared P. Kirtland, Noah Worcester, Horace A. Ackley, John Lang Cassels, and Samuel St. John, names widely known in medicine. The first class graduated in 1844. The requirements for graduation were three years study of medicine, including two terms of attendance on medical lectures, each term extending over a period of sixteen weeks, together "with good moral character." The old college building was erected in 1844, on the present site, at the corner of St. Clair and Erie Streets. This ground has since been continuously occupied for medical college purposes. The length of the course remained sixteen weeks until 1868, when it was increased to seventeen weeks. In 1871 the course was increased to twenty weeks. In 1875 the old Cleveland City Hospital, with its fifty-nine beds, the predecessor of the Lakeside Hospital, was first utilized for clinical purposes. In 1878 the length of the course became twenty-four weeks. In 1881 Charity Hospital, with about seventy-five beds, together with its Maternity Department, was added as a clinical field. In 1887 the present commodious college building was first occupied; in the same year a preliminary examination was for the first time instituted. In 1888 the length of the course was increased to six months, and the number of the required courses to three. In the same year laboratory work in Chemistry and Pathology was made obligatory. An optional four-year course was adopted in 1895, and was made obligatory in the following year. In 1895 the length of the course was increased to eight months; at the same time practical work in the laboratories of Histology, Bacteriology and Physiology, was added as a part of the required work. In 1896 the right to use the present City Hospital for clinical purposes during four months in the year was acquired. In January, 1898, the new Lakeside Hospital

was formally occupied, and the new chemical laboratory was erected. At the same time laboratory instruction in Pharmacology was added as one of the required courses of the curriculum. In 1900 the new laboratory of Clinical Microscopy and Clinical Medicine was erected, and in 1901 it was fully equipped. In 1901, by unanimous recommendation of the Medical Faculty and by vote of the Trustees, the requirements for admission to the first year of the Medical College were increased to include the work of the Junior year in an academic institution of recognized collegiate rank. The rapid development of the curriculum in this school in these late years has been possible only through the generous financial assistance of its many friends, to whom the Medical Faculty thus desires to make public acknowledgement. The graduates of the Medical College now number two thousand, two hundred and eighty-four.

The course of study for the degree of Doctor of Medicine is now of four years duration. The school year or session begins on the first of October, unless this falls on Sunday, in which case it begins on the second, and continues eight months. Theoretical and applied branches of study are graded, and arranged with reference to their bearing upon and preparation for each other, and the effect of the whole course. Instruction is given by lectures, recitations, quizzes, laboratory work, clinical demonstrations, clinical conferences and practical dispensary and bedside work. Endowment of the chairs of Anatomy, Histology, Bacteriology, Physiology, Pathology, Pharmacology, and Clinical Microscopy, permits the employment of instructors who devote all of their time to teaching and research in this college. The buildings are modern in plan, construction and equipment, and ample in size for their purposes. In the subjects of Anatomy, Physiology, Histology, Embryology and Comparative Anatomy, Bacteriology, Pathological Anatomy, Pharmacology, and Clinical Microscopy, laboratory work accompanies the didactic instruction, and is required of every student. In the Senior class every student is required to do practical work in the Dispensaries, at the bedside in the hospitals, and in the obstetrical wards.

FACULTY

CHARLES FRANKLIN THWING, D. D., LL. D., 55 Bellflower Av.
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JOHN H. LOWMAN, A. M., M. D., 441 Prospect St.
Professor of Medicine and Clinical Medicine.

JOHN P. SAWYER, A. M., M. D., 536 Rose Building.
Professor of Medicine and Clinical Medicine.

WILLIAM T. CORLETT, M. D., L. R. C. P. (London), 553 Euclid Av.
Professor of Dermatology and Syphilis.

HENRY S. UPSON, A. B., M. D., 514 New England Building.
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Dean and Executive Officer of the Faculty.

CARL A. HAMANN, M. D., 661 Prospect St.
Henry Wilson Payne Professor of Anatomy.

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WILLIAM T. HOWARD, JR., M. D., 88 Dorchester Av.
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THOS. J. TAYLOR, M. D., 2153 Superior St.
Clerk of Medical College.

ANDREW FLOWER, Erie and St. Clair Sts.
Prosector and Curator Anatomical Rooms.

MRS. FLOWER, Erie and St. Clair Sts.
Janitress.

GRADUATES.

GEORGE I BAUMAN, - - - - - - - - - - Cleveland
NATHAN WORTH BROWN, B. S., - - - - - - Swatow, China
WEBB PARKS CHAMBERLAIN, A. B., - - - - - - Cleveland
CARL CHERDRON, - - - - - - - - - - - Cleveland
FREDERICK EDWARDS DILLEY, - - - - - - - - Cleveland
RALPH WOODBURY ELLIOTT, Ph. B., - - - - - - Cleveland
HENRY JOHN GERSTENBERGER, - - - - - - - Cleveland
HOMER HARVEY HEATH, B. L., - - - - - - - White House
WALTER CENTENNIAL HILL, - - - - - - - Berlin Heights
ALFRED ALEXANDER JENKINS, - - - - - - - - Cleveland
HENRY CREATH KELKER, - - - - - - - - - Kelker
FRED KERN MCCUNE, B. S., - - - - - - - Buena Vista, Pa
JOHN FRANCIS RUDOLPH, A. B., - - - - - - - Cleveland
WILLIAM EDWARD SAMPLINER, - - - - - - - - Cleveland
EDWARD JAMES SCANLON, - - - - - - - - Cleveland
GEORGE WANZER SHEPARD, - - - - - - - Mantua Station
OSCAR MERLE SHIREY, - - - - - - - - Loveland, Col
JOHN ALBRO SIPHER, A. B., - - - - - - - - - Medina
CHARLES EDWARD SPRING, - - - - - - - - - Elyria
CHARLES WESLEY THOMAS, A. B., - - - - - - - - Cleveland
HARRY DAVID VAIL, - - - - - - - - - - Cleveland
JOHN ALLEN VINCENT, - - - - - - - - - Cleveland
CARL RICHARD WEDLER, - - - - - - - - Cleveland
WILLIAM HERVEY WHITE, - - - - - - - - Chandlersville
IRVIN SAMUEL WORKMAN, B. S., - - - - - - - Danville
THOMAS CHARLES YOUNG, - - - - - - - - - Cleveland

Graduates, 26.

STUDENTS

FOURTH YEAR

Samuel Sylvester Berger,	*Cleveland,*	173 Forest St.
John Joseph Lincoln Bolden,	*Cleveland,*	25 Newton St.
John Henry Brett,	*Cleveland,*	34 Ocean St.
Shepard H. Burroughs,	*Northfield,*	11 Cheshire St.
Albert Emmons Connell,	*Cleveland,*	16 Dunham Pl.
John Buchanan Donaldson,	*Lorain,*	154 N. Perry St.
Henry George Golden, A. B.,	*Cleveland,*	3425 Euclid Av.
Isadore Jacob Goodman,	*Cleveland,*	264 Columbus St.
Albert Thomas Grills,	*Elyria,*	17½ Williams St.
Ardon Philo Hammond,	*Cleveland,*	984 Scovill Av.
Frank Carlton Hoskins,	*Grd. Rapids, Mich.,*	38 Wilbur Av.
Frank Hasson Ikirt,	*East Liverpool.*	
Foster W. Jackson,	*Warren,*	Hotel Beverly.
Perry Firestone King, B. S.,	*N. Georgetown,*	792 Superior St.
Emanuel Manny Koblitz,	*Cleveland,*	183 Kennard St.
Wade Allison Lewis,	*Galion.*	
Carl Henri Lenhart, Ph. B.,	*Wauseon,*	1234 Oakdale St.
George Washington Magargee,	*Pardoe, Pa.*	
Russell Hunter McClure,	*Elyria,*	53 Holyoke Pl.
Sidney Morrill McCurdy,	*Andover, Mass.*	
R. M. Manley, B. S.,	*Garrettsville.*	

Karl Elmer Ochs,	*Kenton,*	1103 Central Av.
Nicholas Aloysius O'Connor,	*Cleveland,*	224 Starkweather Av.
Charles Trumbo Pankhurst,	*Fostoria,*	117 Chestnut St.
D. Nevin Sandoe,	*Columbus,*	53 Holyoke Pl.
Fred M. Sayle,	*Cleveland,*	1499 Cedar Av.
William Arthur Schlesinger,	*Cleveland,*	129 McBride St.
Ralph Henry Sill,	*Millersburg,*	53 Holyoke Pl.
Demba Morton Spicer,	*La Grange,*	2370 Crosby St.
John Alfred Staral,	*Cleveland,*	1251 Willson Av.
Chauncey C. Stewart,	*Poland, O.*	
Harry Minch Tarr,	*Cleveland,*	193 Clinton St.
Jesse Eugene Thompson,	*Bristolville,*	168 Crawford Rd.
Bert Emerson Tyler,	*Cleveland,*	51 Daisy Av.
John Henry Wells,	*Glenville,*	121 Lonsdale Av.
Michael Cyrillus Yeagle, Ph. B.,	*Clyde,*	815 Parkwood Av.
Harvey Elmer Yoder,	*North Industry,*	1103 Central Av.
Samuel Alexander Young,	*Cleveland,*	2370 Crosby St.
William Otto Ziemer,	*Cleveland,*	34 Woodbridge St.

FOURTH YEAR, 39.

THIRD YEAR

Newton S. Banker, A. B., Ohio Normal University.	*Canton,*	739 Superior St.
Arthur M. Cheetham,	*Cleveland,*	805 E. Madison Av.
Ernest Harper Cox, B. S., Wabash College.	*Cleveland,*	513 E. Prospect St.
Egbert Frank Davis, Ph. B., Baldwin University.	*Galion,*	124 Handy St.
Claude Leroy Difford, A. B., Adelbert College.	*Cleveland,*	49 Alum St.
Norman William Ingalls, B. S., Baldwin University.	*La Grange,*	9 Dodge Ct.
Everton Jay Lawrence, A. B., Williams College.	*Norwalk,*	413 The Ellington.
William Palmer Lucas, A. B., Wooster University.	*Cleveland,*	49 Idlewood Av.
John Roy McDowell, A. B., Adelbert College.	*Medina,*	Suite 41, The Cary.
Joseph Charles McFate, A. B., Grove City College.	*Cochranton, Pa.,*	739 Superior St.
Roger Harrison Miller, Ph. B., Hiram College.		Garrettsville.
*George Ovando Pay,	*Cleveland,*	118 Whitney St.

*Deceased.

Edward Peterka, A. B., *Cleveland,* 51 Goethe St.
Adelbert College.

J. Douglas Pilcher, Ph. B., *Cleveland,* 54 Auburndale Av.
Adelbert College.

Fred Jacobs Ritterspach, A. B., *Nevada,* 413 The Ellington.
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James Seliskar, *Cleveland,* 13 Wageman St.
St. Thomas College.

Shandor Harry Solomonson, B.S., *Cleveland,* 1022 Case Av.
Case School of Applied Science.

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Arthur Garfield Wilcox, Ph. B., *Akron,* 117 Dodge St.
Adelbert College.

THIRD YEAR, 20.

SECOND YEAR

Francis Patrick Corrigan, A. B., *Cleveland,* 66 Gorman Av.
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Arthur Bradley Eisenbrey, Ph.B., *Cleveland,* Suite 41, The Cary.
Adelbert College.

Birt Eugene Garver, B. L., *Lorain,* Suite 41, The Cary.
Adelbert College.

John Allen Hofmann, Ph. B., *Cleveland,* 161 Putnam St.
Wooster University.

*Malcolm Acton Laughbaum, A.B., *Bucyrus,* Lakeside Hospital.
Oberlin College.

Luman Gordon Moore, Jr., A. B., *Kinsman,* 446 Euclid Av.
Leland Stanford.

Homer Fordyce Swift, Ph. B., *Beaver Falls, Pa.,* 41 The Cary.
Adelbert College.

George Franklin Thomas, A. B., *Akron,* 192 Erie St.
Adelbert College.

Frank Walter Vincent, A. B., *Oberlin,* Hiram House.
Oberlin College.

Andrew Robert Warner, A.B., A.M., *Pulaski, N.Y.,* 739 Hough Av.
Hamilton College.

Robert Franklin Wenger, A. B., *New Philadelphia,* 50½ Davenport
Calvin College.

Henry Klar Yaggi, B. S., *Beloit,* 314 Dunham Av.
Mt. Union College.

SECOND YEAR, 12.

*Deceased.

FIRST YEAR

Charles J. Albl,	*Cleveland,*	1406 Broadway.
Jens Anderson, Keuka College.	*Cleveland,*	710 E. Prospect St.
Benjamin Clyde Barnard, Ph. B., Wooster University.	*Wooster.*	190 Central Ave.
Clyde Lothidge Cummer, Senior, Adelbert College.	*Cleveland,*	396 Bolton Av.
John King Gamble, B. S., Westminster College.	*New Wilmington, Pa.,*	161 Sibley.
Russell Arthur Jewitt, Ohio Wesleyan University.	*Cleveland,*	403 Sibley St.
Ernest Aaron Loewinger, Gymnasium of Papa, Hungary.	*Cleveland,*	390 Scovill Av.
Edmonde De Witte Neer, Senior, Adelbert College.	*De Graff,*	127 Murray Hill Av.
John Harland Rush, B. S., Princeton University.	*Waterloo, Ia.,*	University School.
Earl Frederick Smith, Ohio Wesleyan University.	*Lorain,*	124 Handy St.
Benjamin Briggs Ward, A. B., Wabash College.	*Wickliffe.*	

First Year, 11.

SPECIAL

C. S. Chase, M. D.,	*Iowa City, Iowa.*	
R. E. Hall,	*Iowa City, Iowa.*	
Pierre A. Fish, Ph. D.,	*Ithaca, N. Y.*	
B M. Chandler,	*Cleveland,*	894 Case Av.
Arthur Seidman, A. B., M. D.,	*Cleveland,*	1054 First Av.
H. R. C. Wilson,	*Cleveland,*	74 Burt St.

SUMMARY

Fourth Year	39
Third Year	20
Second Year	12
First Year	11
Special	6
Total	87

REQUIREMENTS FOR ADMISSION

I. Graduates in Arts and Sciences of recognized colleges will be accepted without examination, on presentation of diploma.

II. Students who present certificates from recognized colleges, showing that the work of the Junior year in such colleges has been completed, will be accepted without examination.

III. Students who can not present certificates covering the entire work of the first three years in a recognized college, will be required to pass an examination upon the work in which they may be deficient. These examinations will be conducted by the Faculty of Adelbert College of Western Reserve University.

IV. Students in the Senior class of Adelbert College are permitted to take elective courses in the first year of the Medical College. Such electives, to the extent of nine hours a week, are counted toward the academic degree, so that in this way students may save one year in the combined literary and medical courses.

V. By law of the State of Ohio every student of medicine, in order to be eligible at the end of his course, for examination and license by the State Board of Medical Examination and Registration, must, at the beginning of his course, register with this Board. The examiner for Cleveland is Prof. E. L. Harris, Central High School, Willson Ave., who will issue certificates. A fee of $2.00 is required by the Board.

COLLEGE TRAINING SUGGESTED PREPARATORY TO THE STUDY OF MEDICINE

Students who contemplate the study of medicine should, during their undergraduate course, take as much work in Biology, Chemistry and Physics as is consistent with general

culture training. To this end the student should take the elementary courses in these subjects, as early in his collegiate course as is permissible and follow these by more advanced courses in order that he may be prepared to take up medical work with a thorough knowledge of these subjects. In Biological science, he should take General Biology or Elementary Zoology and Botany, Anatomy of Vertebrates and Embryology of Vertebrates. Courses in Invertebrate Zoology, Phenerogamic Botany and Elementary Physiology are also desirable.

For such work as the student completes in Normal Animal Histology, Vertebrate Anatomy and Embryology, due credit will be given upon presentation of evidence of work, especially on laboratory notes and drawings and he will be required to take in the Medical College only such parts of these subjects as he has not already covered.

In Physics he should take at least the elementary courses. A knowledge of Mechanics, Optics and the elements of Electricity and Magnetism are especially desirable.

The student, previous to entering the medical department, should have completed his studies in Chemistry; his undergraduate work, therefore, should cover inorganic chemistry and qualitative analysis as well as an elementary course in organic chemistry. Quantitative analysis is also desirable. Where, however, the student is deficient in any of these subjects, an opportunity to study them is given in the physiological laboratory. The subject of physiological chemistry is also studied in the medical school.

Since a large part of current literature in medical subjects is written in German and French, the student who contemplates the study of medicine should have a good reading knowledge of these two languages.

The above branches are thus particularly desirable as preparatory studies for medicine.

ADMISSION TO ADVANCED STANDING

Graduates in Arts or Sciences of recognized colleges who have, during their academic course, devoted to the subjects the number of hours, or have covered the text-books mentioned below or their equivalents, and have passed satisfactory examinations thereon, may be admitted to the second year of the course. But the amount of practical work in such courses must not be less than that required in the corresponding subjects during the first year in this college.

Comparative Anatomy, 90 hours; Kingsley or Wiedersheim. Embryology, 90 hours; Foster and Balfour, Hertwig, McMurrich or Heisler. Human Anatomy, 120 hours. Histology, 200 hours; Böhm and Davidoff, Schäfer, Piersol, Stöhr, or Szymonowicz. Inorganic and Organic Chemistry, 300 hours.

Physiology and Physiological Chemistry, 150 hours; Stewart. Practical Physiology by various writers (Arnold, London).

Graduates in Arts or Sciences who are deficient in Practical Anatomy or Histology may still be permitted to enter the second year on condition of making up the deficiency by private work and passing the examination on these subjects during the year.

Students from other recognized Medical Colleges will be admitted to advanced standing, subject to the following conditions:

1. They must present satisfactory evidence that they have completed the required preliminary literary work.

2. Credit will be given for such work as has been satisfactorily done by the student. The head of each department in which credit is sought will satisfy himself of the standing of the applicant, by an informal examination, or by any other means which may be considered necessary. A certificate from the instructor under whom the work has been done must be submitted, as also the note books of the student, and a syllabus of the course.

3. Any course, or any part of a course, which is compulsory in this college, and which has not been sufficiently

covered by the previous work of the student, must be taken at this college.

4. The conditions for the admittance to a class are the same as the conditions of advancement in force for the students of this college, as given below.

The main object of these restrictions is to prevent prospective students from undertaking work for which they are not sufficiently prepared, and for which they would not have time. Deficiencies are most likely to exist in the experimental subjects of the freshman and sophomore years of the curriculum. Students who wish to enter the junior or senior classes must therefore expect, as a rule, to spend the greater part of their first year in making up back work. This necessity may be avoided in many cases by attending the courses which are offered during the summer.

Graduates in Medicine from other schools, who desire to apply for the degree of Doctor of Medicine in this school, must present satisfactory proof that they have completed the preliminary literary work required for admission to this College, must take at least the work of the fourth year, and must pass the examinations on all the subjects of this year, and any subjects of other years in which they may be deficient. Graduates in Medicine, or other students who desire to take special courses without graduation, will be admitted without examination. Such special courses will not count in any way for the degree of Doctor of Medicine in this College.

Examination of certificates for admission will take place in the college building on the two week days preceding the opening of the session. Candidates should attend at the college on either of these days, bringing their certificates with them. Diplomas or certificates may also be personally presented to the Registrar during the week preceding the opening, or forwarded to him at any time.

In accordance with the laws of certain states, not including Ohio, all persons desiring to practice medicine in these states are required to have attended, before taking the state examination, four full years at a regular medical college, whether they are graduates of a literary college or not. The attention of candidates for advanced standing is therefore called to this fact.

The laws of the State of Ohio as well as the majority of other states and territories require that any person applying for a license to practice medicine, whether having a medical diploma or not, must pass an examination before the State Board of Medical Examination and Registration.

CONDITIONS OF ADVANCEMENTS.

The promotion from one class into another will be determined by the results of examinations and by the other records of the students' work. A final grade of 75% will be required for passing in any subject. A student who has failed in a course may be required, at the discretion of the instructors, to repeat his attendance at all or a part of the course; or he may only be required to be re-examined within the first three weeks of the school-year. If he have failed in subjects covering 300 hours or more of schedule time,* re-attendance of at least one-half of the work in which he has failed will be required before a re-examination is allowed. With the permission of the head of the department, attendance of summer courses or private instruction by a member of the teaching staff may be accepted in place of attendance at the regular classes.

The available time of each year being amply filled by the compulsory studies of that year, students will not be able, and will not be permitted, to enter a higher class until they have shown their fitness to carry the work of this class. In

* One hour per week through the year is counted as 30 hours of schedule time.

deciding this question of fitness, the faculty will be guided by the following rules:

1. The student must have passed, by the third week of October, in every subject of the class two years below that which he wishes to enter, (i. e. he cannot enter the junior class unless he has been passed in all freshman subjects, nor the senior class, if he has not passed all the freshman and sophomore examinations).

2. He will not be permitted to enter a class if he is obliged to repeat, or attend at, 150 hours or more of the work of the preceding year, or if he is deficient in subjects amounting to 300 schedule hours or more. (This rule does not apply to the entrance of graduates of colleges into the sophomore class, which is covered by the regulations of page 15.)

3. As a rule, promotions from one class to another will only be made at the end and beginning of the school year.

4. Students who are not promoted will be permitted to take any courses of the next class for which they are sufficiently prepared, and which do not interfere with the work in which they are conditioned. All the courses taken (repeated and new) must not amount to more than 1000 schedule hours, and a lesser number of hours will generally be advisable. Examinations in these courses may be taken with the regular class. By supplementing this work with summer-courses, the ground which has been lost may in some cases be recovered.

5. *Candidates for the degree who have failed to graduate* may be required to repeat their attendance at such courses as the faculty may direct; those who have failed in three courses or more must repeat their attendance at all the courses in which they have failed, and at such further courses as the faculty may direct. When these conditions of attendance have been satisfied, re-examinations in the subjects in which the candidate was deficient will be granted as follows: If the student have failed in but one subject, he may be re-examined in October; if he have failed in two subjects, in January; if he have failed in three subjects or more, he must take the regular examinations in these subjects with the senior class. Diplomas will only be granted at the regular commencement.

COURSES OF STUDY

Number of Hours Per Week.

FIRST YEAR

LECTURES AND RECITATIONS

Anatomy ..... 3 hours
Histology and Microscopical Anatomy ..... 1 hour
Comparative Anatomy and Embryology ..... 1 hour
Physiology ..... 1 hour

LABORATORY WORK

Histology and Microscopical Anatomy ..... 6 hours
Comparative Anatomy and Embryology ..... 6 hours
Physiology ..... 4 hours
Dissections ..... 12 hours, until March 1st
Electives ..... 3 hours, until March 1st
9 hours, after March 1st
Chemistry ..... 6 hours, until March 1st
12 hours, after March 1st

SECOND YEAR

LECTURES AND RECITATIONS

Physiology ..... 3 hours, until March 1st
1 hour, after March 1st
Anatomy and Applied Anatomy ..... 4 hours
Pathology and Bacteriology ..... 2 hours
Bandaging and Splints ..... 2 hours after March 1st
Physical Diagnosis ..... 2 hours, after March 1st
Pharmacology ..... 1 hour

LABORATORY EXERCISES

Physiology ..... 6 hours, until March 1st
2 hours, after March 1st
Pathology and Bacteriology ..... 9 hours
Pharmacology ..... 2 hours, until March 1st
7 hours, after March 1st
Dissections ..... 9 hours, until March 1st
Electives ..... 2 hours, after March 1st
Demonstration in Gross Pathology ..... 1 hour

THIRD YEAR*

LECTURES AND RECITATIONS

Pharmacology ..... 2 hours
Therapeutics ..... 3 hours
Obstetrics ..... 2 hours
Medicine ..... 3 hours
Surgery ..... 2 hours
Gynecology ..... 1 hour
Physical Diagnosis ..... 2 hours

DIDACTIC AND CLINICAL LECTURES

Medicine ..... 4 hours
Surgery ..... 6 hours
Nose, Ear and Throat ..... 1 hour
Dermatology ..... 1 hour

LABORATORY EXERCISES

Pharmacology ..... 4 hours before February 1st
Applied Anatomy ..... 1 hour
Pathological Demonstrations ..... 1 hour
Clinical Laboratory ..... 4 hours

FOURTH YEAR

Daily work in Dispensary Section, 1 to 3 p. m., Lakeside Hospital. Individual Assignment for ward cases. Clinical Laboratory in connection with Clinics and Assigned Cases. Operative Surgery taught to Sections in second half-year. Exercises in Obstetric Mannikin taught to Sections. Autopsies and Clinical Pathological material worked up throughout the year. No Sections to be detailed to Hospitals or Dispensaries in hours conflicting with schedule.

GENERAL CLINICS

Medicine ..... 4 hours
Surgery ..... 6 hours
Gynecology ..... 2 hours
Obstetrics ..... As material offers

LECTURES

Hygiene and Preventive Medicine ..... 2 hours
Jurisprudence ..... 1 hour

LECTURES, CLINICAL AND DIDACTIC

Nervous Diseases ..... 1 hour
Pediatrics ..... 1 hour
Ophthalmology ..... 1 hour

Special clinics in medicine and surgery at St. Alexis or City Hospitals, two sections to half of class, two hours each per week.

SCHEDULE OF HOURS, 1904–1905

(The hours in square brackets begin with March 1st; those in rounded brackets run until March 1st.)

FIRST YEAR CLASS

Monday—Histological Laboratory, 8 to 12 a. m. (Dissections, until March 1st, 1:30 to 4:30 p. m.) [Elective Work (Note A), after March 1st, 1:30 to 4:30 p. m.]

Tuesday—Comparative Anatomy and Embryology Laboratory (Note B), 8 to 11 a. m. Anatomy Lecture, 11 to 12 a. m. (Dissections, until March 1st, 1:30 to 4:30 p. m.)

Wednesday—Physiology Laboratory, 8 to 10 a. m. Histology Laboratory, 10 to 12 a. m. (Dissections, until March 1st, 1:30 to 4:30 p. m.)

Thursday—Comparative Anatomy and Embryology Lecture (Note B), 8 to 9 a. m. Elective Work (Notes A and B), 9 to 12 a. m. (Dissections (Note C) until March 1st, 1:30 to 4:30 p. m.) [Chemistry (Note C), after March 1st, 1:30 to 4:30 p. m.]

Friday—Histology Quiz, 8 to 9 a. m. Physiology Lecture, 9 to 10 a. m. Physiology Laboratory, 10 to 12 a. m. (Dissections (Note D), until March 1st, 1:30 to 4:30 p. m.) [Elective Work (Notes A and D), after March 1st, 1:30 to 4:30 p. m.]

Saturday—Comparative Anatomy and Embryology Laboratory (Note B), 8 to 11 a. m. Anatomy Lecture, 11 to 12 a. m.

NOTES TO FIRST YEAR SCHEDULE

Note A—A number of Elective Courses will be offered, supplementary to the regular work in the departments. The subjects of these courses will be announced later. Students must account for the whole time assigned to the Electives, but are allowed the choice of the subjects; except that those conditioned in Chemistry must elect this branch. The Elective work may also be taken at Adelbert College.

Note B—These courses may be taken at Adelbert College.

Note C—Only for students conditioned in Chemistry.

Note D—Only for students not conditioned in Chemistry.

SECOND YEAR CLASS

Monday—Physiology Lecture, 8 to 9 a. m. Bacteriology and Pathology, 9 to 12 a. m. (Dissections, until March 1st, 1:30 to 4:30

p. m.) [Physical Diagnosis at Charity Hospital, after March 1st, 2 to 3 p. m.] Applied Anatomy, 4 to 5 p. m.

Tuesday—(Physiology Laboratory, until March 1st, 8 to 12 a. m.) [Pharmacology Laboratory, after March 1st, 8 to 12 a. m.] (Dissecting, until March 1st, 1:30 to 4 p. m.) (Anatomy, until March 1st, 4 to 5 p. m.) [Anatomy, after March 1st, 3 to 4 p. m.] [Bandaging, after March 1st, 4 to 5 p. m.]

Wednesday—Pharmacology Lecture, 8 to 9 a. m. Bacteriology and Pathology, 9 to 12 a. m. [Pharmacology Laboratory, after March 1st, 1:30 to 4:30 p. m.]

Thursday—(Physiology Lecture, until March 1st, 8 to 9 a. m.) Bacteriology and Pathology, 9 to 12 a. m. (Dissections, until March 1st, 1:30 to 4:00 p. m.) [Physical Diagnosis, after March 1st, 3 to 4 p. m.] Applied Anatomy, 4 to 5 p. m.

Friday—(Physiology Lecture, until March 1st, 8 to 9 a. m.) Bacteriology and Pathology, 9 to 12 a. m. (Dissections, until March 1st, 1:30 to 3:00 p. m.) Anatomy, 3 to 4 p. m. [Bandaging, after March 1st, 4 to 5 p. m.]

Saturday—(Pharmacology Laboratory, until March 1st, 8 to 10 a. m.) [Elective Work, after March 1st, 8 to 10 a. m.] Physiology Laboratory, 10 to 12 a. m.

THIRD YEAR CLASS*

Monday—Pharmacology, 8 to 9 a. m. Therapeutics, 9 to 10 a. m. Obstetrics, 10 to 11 a. m. Fractures and Dislocations, 11 to 12 a. m. Pharmacological Laboratory, to Feb. 1st, 1:15 to 4:00 p. m. Applied Anatomy, 4 to 5 p. m.

Tuesday—Medical Clinic at Lakeside Hospital, 8:30 to 10 a. m. Surgical Clinic at Lakeside Hospital, 10 to 12 a. m. (including instructions in anæsthetics). Until Jan. 1st, Clinical Surgery, 2 to 3:30 p. m. Physical Diagnosis at City Hospital, 3:30 to 5 p. m. After Jan. 1st, Clinical Laboratory, 2 to 5 p. m.

Wednesday—Medical Recitation at Charity Hospital, 8 to 9 a. m. Medical Clinic at Charity Hospital, 9 to 10 a. m. Surgical Clinic at Charity Hospital, 10 to 11 a. m. Principles of Surgery at Charity Hospital, 11 to 12 a. m. Dermatology, 2 to 5 p. m. To Feb. 1st, Pharmacological Laboratory, 3:15 to 5:15 p. m.

Thursday—Pharmacology, 8 to 9 a. m. Therapeutics, 9 to 10 a. m. Obstetrics, 10 to 11 a. m. Gross Pathology, Demonstration, 11 to 12

a. m. Clinical Laboratory, until Jan. 1st, 1:30 to 3 p. m. Medicine at Lakeside Hospital, 3 to 4 p. m. Applied Anatomy, 4 to 5 p. m.

Friday—Therapeutics, 8 to 9 a. m. Gynecology, 9 to 10 a. m. Clinical Laboratory, 10 to 12 a. m. Nose, Ear and Throat, Lakeside Hospital, 2 to 3 p. m. Genito-Urinary, College Building, until Jan. 1st, 3 to 4 p. m. Physical Diagnosis, Lakeside Hospital, after Jan. 1st, 3 to 4 p. m. Medicine, College Building, 4 to 5 p. m.

Saturday—Medicine, Charity Hospital, 9:30 to 10:30 a. m. Surgical Clinic, Charity Hospital, 10:30 to 11:30 a. m. Principles of Surgery, Charity Hospital, 11:30 to 12:30 a. m. Clinical Surgery, 2 to 3:30 p. m. Physical Diagnosis at City Hospital, until Jan. 1st, 3:30 to 5 p. m.; after Jan. 1st, Clinical Laboratory, 2 to 5 p. m.; after Jan. 1st, sections to Charity Hospital Dispensary. Instructions at special hours in history taking, recording, cataloguing and references. Attendance on autopsies as especially arranged.

FOURTH YEAR CLASS

Daily work in Dispensary Section, Lakeside Hospital, 1 to 3 p. m. Individual assignment in Ward Cases. Clinical Laboratory in connection with Clinics and Assigned Cases. Operative Surgery taught in Sections in second half-year. Exercises in Obstetrics and Mannikin taught to Sections. Autopsies and Clinical Pathological material worked up throughout the year. Sections detailed to St. Alexis Hospital Wednesday and Saturday mornings. Quizzes on Clinics in hours to be announced.

Monday—Clinical Laboratory and Ward Cases by Sections, 8 to 10 a. m. Obstetrics, 10 to 11 a. m. Fractures (first half-year), 11 to 12 a. m. Dispensary Clinics, 1 to 3 p. m. Surgical Diagnosis, Lakeside Hospital, 3 to 4 p. m.

Tuesday—Medical Clinic, Lakeside Hospital, 8:30 to 10 a. m. Surgical Clinic, Lakeside Hospital, 10 to 12 a. m. Dispenary Clinics, 1 to 3 p. m. Nervous Diseases, Lakeside Hospital, 3 to 4 p. m.

Wednesday—Medical Clinic, Charity Hospital, 9 to 10 a. m. Surgical Clinic, Charity Hospital, 10 to 11 a. m. Dispensary Clinic, 1 to 2 p. m. Pediatrics, Lakeside Hospital, 2 to 3 p. m. Hygiene and Preventive Medicine, 3 to 4 p. m.

Thursday—Clinical Laboratory and Ward Cases, by Sections, 8 to 10 a. m. Obstetrics, 10 to 11 a. m. Gynecological Clinic, Lakeside Hospital, 11 to 12 a. m. Dispensary Clinic, 1 to 3 p. m. Medical Clinic, 3 to 4 p. m.

FRIDAY—Jurisprudence, 8 to 9 a. m. Surgical Clinic, Lakeside Hospital, 10 to 12 a. m. (including instructions in anæsthetics). Dispensary Clinic, 1 to 3 p. m. Ophthalmology, Lakeside Hospital, 3 to 4 p. m. Hygiene and Preventive Medicine, 4 to 5 p. m.

SATURDAY—Gynecological Clinic, Charity Hospital, 8 to 9:30 a. m. Medicine, Charity Hospital, 9:30 to 10:30 a. m. Surgical Clinic, Charity Hospital, 10:30 to 11:30 a. m. Dispensary Clinic, 1 to 3 p. m. City Hospital Clinics, until Jan. 1st, 2 to 5 p. m.

*The schedules for the third and fourth year classes are those in use in the current term. It is expected that only minor modifications will be introduced for the coming year. Beginning with the class entered in 1903, the pharmacological laboratory work will be given entirely in the second year, leaving more time for clinical work in the junior year.

DISPENSARY SECTIONS

SECTION.	1	2	3	4	5	6	7
Oct. 5 to Oct. 31,	Eye	Paed.	Med.	N. D.,	Surg.	Gyn.	N. E. T.
Nov. 1 to Nov. 28,	N. E. T.	Eye	Paed.	Med.	N. D.	Surg.	Gyn.
Nov. 30 to Jan. 2,	Gyn.	N. E. T.	Eye	Paed.	Med.	N. D.	Surg.
Jan. 4 to Jan. 30,	Surg.	Gyn.	N. E. T.	Eye	Paed.	Med.	N. D.
Feb. 1 to Feb. 27.	N. D.	Surg.	Gyn.	N. E. T.	Eye	Paed.	Med.
Feb. 29 to Mar. 27,	Med.	N. D.	Surg.	Gyn.	N. E. T.	Eye	Paed.
Mar. 29 to Apr. 24,	Paed.	Med.	N. D.	Surg.	Gyn.	N. E. T.	Eye

DEPARTMENTS AND METHODS OF INSTRUCTION

ANATOMY

PROFESSOR HAMANN

DR. TIERNEY

The course in anatomy consists of lectures upon descriptive and applied anatomy, together with demonstrations, recitations and quizzes. In order to facilitate the work in osteology, students of the first year are provided with separate portions of the skeleton, which they are permitted to take to their rooms for study. Two hours in recitations, and twelve hours for dissecting, until March 1st, in suitable periods weekly, are given to anatomy during the first year. Students are required to dissect all parts of the cadaver at least once. For demonstrations upon the cadaver and anatomical preparations the second year class is divided into a number of small sections, whose meetings take the form of anatomical conferences rather than of formal demonstrations. Each individual student thus has an excellent opportunity for becoming familiar with the various parts of the body, and for receiving direct personal instruction. Four hours a week are given to lectures and recitations in the second year and nine hours a week until March 1st to dissecting. In the third year instruction is given by lectures and recitations in applied anatomy.

HISTOLOGY, COMPARATIVE ANATOMY AND EMBRYOLOGY

PROFESSOR WAITE

DR. AUSTIN.

HISTOLOGY AND MICROSCOPICAL ANATOMY

The course includes work upon the fundamental mammalian tissues, followed by the study of the finer anatomy of the mammalian organs. The material used is human tissue in large part, supplemented by tissue from other mammals. In the study of the organs the student first becomes acquainted with the macroscopic features in fresh material and then proceeds to the finer anatomy. All of the organ systems are studied and the student secures a general survey of each system, together with detailed knowledge of the component parts. The time allowance and equipment permits of a thorough course in this fundamental subject and prepares for the work in pathology, for which this course is a prerequisite. An essential part of the work is training in the standard methods of technique.

Each student stains and mounts over two hundred sections which he later studies, describes and draws. He is required to carry a considerable number of tissues through all the steps of preparation, including removal from the animal, fixation by several methods, hardening, dehydration, infiltration, embedding in celloidin and in paraffin, sectioning, including serial sectioning, staining in toto, in sections and on the slide and mounting. The rapid preparation with the freezing microtome and the special methods for blood examination are also used. A student may elect to do additional work in this subject, the details to be arranged by conference.

The recitations supplement the laboratory work and aim to bring out those points which the student does not see in his sections. One recitation and six hours' laboratory work per week throughout the Freshman year.

COMPARATIVE VERTEBRATE ANATOMY

The aim of this course is to acquaint the student with the more important structural characteristics of the several classes of vertebrates, and also to prepare for the experimental work in physiology. The student dissects, as carefully as the time will allow, representatives of the different classes of vertebrates, and makes descriptive notes and drawings of these dissections. The lectures and recitations deal with the modifications of the several systems of organs in the vertebrate series and are supplementary to assigned reading in a standard text-book. Quizzes are held upon the dissections, lectures and assigned reading. This course or its equivalent is a prerequisite to the course in embryology. The student may elect to do additional work in this subject, the details to be arranged by conference. One lecture or recitation and six hours' laboratory work per week, first half Freshman year.

VERTEBRATE EMBRYOLOGY

This course is planned to instruct the student in the fundamental facts of vertebrate development. The laboratory work begins with a rapid study of cleavage and gastrulation in forms representing the fundamental conditions in these processes, followed by the study of the development of the chick to the end of the fourth day. The development of the pig is then taken as a favorable form for the study of mammalian ontogeny. In these two forms the development of external form, of the germ layers, organ systems, and the individual organs is taken up with as much detail as the time will allow. In the recitations emphasis is laid upon the development of the

human embryo. The student may elect to do additional work in this subject, the details to be arranged by conference. One recitation and six hours laboratory work per week, second half Freshman year.

PHYSIOLOGY

PROFESSOR MACLEOD

DR. COBB

The course in physiology extends over two years. During the first year the class meets five hours a week, the time being almost entirely occupied in practical laboratory work; in bio-chemistry during the first half of the session, and in experimental physiology, as studied on amphibians, during the latter half. These laboratory exercises are supplemented by lectures and quizzes.

Until March 1st, in the second year, six hours a week are devoted to the practical application of the more important experimental methods used in the study of the physiology of circulation, respiration, digestion, metabolism and excretion. These experiments are made on mammals.

After March 1st of this year two hours a week are spent in studying the experimental physiology of the nervous system and special senses; and in advanced bio-chemistry.

Throughout the first and second year, there are, besides the practical work, lectures and quizzes (one hour per week during the first year; in the second year, three hours a week until March 1st, one hour after March 1st). The lectures and quizzes throughout the course are arranged, as far as possible, to supplement the practical work, and during the latter part of the second year some of the lectures are devoted to the application of physiology to medicine. Examinations are held towards the end of each month on the month's work. Arrangements are also made by which the entire course in physiology can be taken in one year.

CHEMISTRY

Students who are conditioned in chemistry upon entering the Medical School may remove these conditions by private work in the physiological laboratory. The schedule has been arranged so as to leave 240 hours for this work.

Besides this a special class is held in organic chemistry with special reference to those parts of the subject which are of interest from a biological and medical standpoint. The work of this class is conducted by lectures and quizzes and by demonstrations. No extra fee is charged for this class.

PHARMACOLOGY AND MATERIA MEDICA

PROFESSOR SOLLMANN

DR. BROWN.

The course in this department aims to give an exact knowledge of the actions and characters of drugs, by means of lectures, recitations, conferences, laboratory demonstrations, experimental work by the students, reviews and tests. The regular course covers the entire subject to the extent which is deemed necessary for the general practitioner. Various optional work is offered in addition.

The work begins in the sophomore year with pharmacognery, pharmacy, general toxicology, incompatibilities, prescription-writing and flavors. The locally acting drugs (irritants, stomachics, carminatives, cathartics, emollients, etc.), are then studied. In this year, 30 hours are devoted to lectures and recitations, and 60 hours to laboratory work.

The course continues throughout the junior year, with 50 hours of laboratory work and 60 hours of lectures, recitations, etc. The didactic work covers the alkaloids, neutral principles, salt and ion actions, and the systemic action of metals. The study of the actions of drugs is based upon a critical resume of the experimental and toxicological data, and the application of these to the clinical uses of medicines. It is aimed to furnish the students with a clear understanding of the actions, and of the evidence on which our knowledge of the subject rests. The drugs are grouped according to their most prominent therapeutical and chemical relations. A broad outline of the principal features of a group is given in a lecture. The subject is then assigned for study, and reviewed in recitations, when the details of the subject are developed. Review quizzes and written tests are given at intervals during the course.

This systematic study of the individual drugs is supplemented, in the laboratory course, by a study of the individual functions of the tissues, as modified by drugs. The experiments are designed so as to bring out some important pharmacological principle, or to investigate the possible reactions of the important functions to drugs, or to illustrate important methods of pharmacological experimentation. By a careful selection of the drugs, all the more important facts of pharmacology are demonstrated.

The object of each exercise is first explained in a preliminary conference, and attention is directed to the phenomena to be observed. The experiments are then performed by the students, or demonstrated with the assistance of members of the class. The results are then

discussed informally at the next meeting, especial stress being laid on making proper deductions from the experimental data. The laboratory course therefore furnishes, by direct observation, a ground-plan of pharmacology, on which the book-study may be built up.

The chemical and physical character of drugs and their preparation, and the methods of administration, are studied in connection with their actions. A collection of materia medica, comprising some 1500 specimens, is always accessible to students, and a familiarity with the appearance, etc., of the more important preparations is required for passing in the subject. Pharmacy and toxicological analysis are treated in so far as they are important to practitioners. Prescription-writing is taught by practical drills scattered through the course; these are designed to illustrate at the same time the methods of employing the drugs.

The examinations for the entire course are given at the end of the junior year. The grades of the recitations and of the written tests are considered in the final grade.

In addition to this compulsory work, there are offered various optional courses, *e. g.* in pharmacy, toxicological analysis, abstracting of papers, preparation of theses, special lectures, and advanced laboratory work. Every encouragement and aid is given to original investigations.

(According to the revised schedule, all the laboratory work will be given in the sophomore year, the total number of hours remaining unchanged.)

PATHOLOGY

PROFESSOR HOWARD

DRS. PERKINS, SIPHER, DOLLEY AND SCHULZ

Instruction in this department is given by lectures, laboratory work, and demonstrations of fresh and prepared specimens. The most important feature of this course is the laboratory work done by each student.

Bacteriology. Dr. Perkins. Laboratory work in this course is given four half days a week from October 1 to Christmas in the Sophomore year. The subject is elucidated by informal lectures, demonstrations, and experiments on animals, as occasion requires. The student, after having prepared the various media required, is instructed in the principles of disinfection and sterilization, the bacteriolgical examination of air, water and soil, and the methods of cultivating, staining and studying bacteria. The pathogenic bacteria and

various molds and yeasts are then studied. Altogether from thirty to thirty-five different micro-organisms are studied by each student. Students are trained in the employment of bacteriological methods in medical and surgical diagnosis, and those who prove themselves capable are permittted to pursue investigations along special lines, on subjects assigned them by the professor in charge.

Pathological Histology. Prof. Howard, Drs. Perkins and Sipher. The course comprises eleven hours a week of laboratory work for the last five months of the second year. It begins with the study of the various forms of tissue degeneration and necrosis. This is followed by the study of inflammation in the frog's mesentery and in sections of hardened tissue, showing all the various forms of inflammatory processes. The infectious granulomata are then taken up, and the forms and special characters of the reaction of the tissues to the specific organisms of infectious diseases are demonstrated. The study of the various pathological processes is based upon their ætiology, and in addition to human tissues, the material from the experiments on animals in the bacteriological course is used for this purpose. The effects of bacterial and other toxines upon the tissues is taught in the same manner. Tumors are next considered. Based upon the above as a ground work, the pathological histology of the various organs and systems is studied. The use of fresh frozen sections of material derived from autopsies, the operating room and animal experiments forms an important feature of the course. Each student receives and is required to stain, mount, carefully study and draw about three hundred and fifty sections.

Demonstrations of Gross Pathological Anatomy. Prof. Howard, and Drs. Perkins, Sipher, Dolley, Schulz and Selby. Demonstrations are made to second and third year students from the large amount of fresh material derived from autopsies and from the surgical and gynecological clinics. Students are required to handle and describe specimens and to make diagnoses from the gross appearances, the macroscopical diagnosis of tumors being an important feature. The hospital connections of the laboratory are such that students can be trained in making autopsies and in writing protocols of the lesions found.

General Pathology. Prof. Howard and Dr. Perkins. Throughout the course lectures are given in connection with the laboratory work. In these lectures the various infectious diseases, immunity, the degeneration and regeneration of tissue, the ætiology of tumors, and the special pathology of the various organs and systems are considered.

Advanced and Special Work. A special room, well lighted and equipped, is provided for physicians and advanced students who wish to undertake special work in pathological histology, experimental pathology and bacteriology.

CLINICAL LABORATORY

DR. LADD

The new clinical laboratory at Lakeside Hospital is thoroughly equipped with all the necessary apparatus for making complete examinations of the various secretions and excretions, normal and pathological; the blood, urine, sputum, gastric contents, fæces, etc.

Microtome for frozen sections and celloidin work and the various necessary stain and reagents are at the disposal of the students, they being required to apply the methods of technique taught in the laboratory in the study of special cases assigned to them in the hospital wards. A large room of the clinical laboratory is devoted exclusively to the fourth year class, and the main lecture room is devoted entirely to the third year class, who are given systematic instruction throughout the session. The fourth year students are required to apply the knowledge thus gained in working up the cases assigned to them during the fourth year. Special rooms are equipped for the examination of sputum and making chemical tests; also a dark room is fitted up for doing polaroscopic and hæmoglobin work. A few rooms are available for the use of special workers, these rooms to be assigned at the discretion of the director of the laboratory. Microscopes and other instruments are available for the work in this department. The total laboratory capacity contains 2,600 square feet.

Clinical Microscopy. Work in this department will cover the third and fourth years. The third year work will comprise a systematic course, consisting of two laboratory exercises a week throughout the term, on blood, sputum, gastric juice, urine, fæces and pathological exudates.

The technique employed in doing paracentesis of the chest, abdomen and spinal canal; in taking throat, blood, bladder and uterine cultures as well as the further examination of the products obtained, will be carefully outlined.

The methods of preparing material obtained at the operating table for microscopical examination will be shown and each student required to do such work before the completion of his course. The object of this course is not only to cover the ground outlined above, but to prepare the student for independent work. In the fourth year the students will work in small groups in the room assigned to them

and especially equipped for their use. They will receive no systematic instruction, but will work under the direction and control of the instructor. Their work will consist of the examination of urine, blood, sputum, gastric juice, fæces, and purulent and other discharges from their ward and dispensary cases, as well as of tumors and other material removed at operations. This work is obligatory, is done in connection with the students' own clinical cases, and is therefore thoroughly practical.

THERAPEUTICS

PROFESSOR DARBY

Three hours a week are devoted to Therapeutics during the third year. The teaching is done mainly by means of lectures and quizzes, designed to make the student familiar with all the resources of Therapeutics and enable him to make an intelligent and satisfactory use of them in his future work. Medicines are studied in groups based on their therapeutic affinities, and individually in their application to disease. Careful attention is paid to dossage, the time and mode of administration, influences and conditions which may modify their actions, the effect of toxic doses, the treatment of poisonings and of drug habits. Electrotherapy, Kinesitherapy, including Massage and Rest-Cure, Psychotherapy, including Hypnotism and Suggestion, Serotherapy, Hydrotherapy and Balneotherapy, Dietetics and Climatology are carefully studied in their relation to pathological conditions. The aim of the course is to give the student a thorough and practical knowledge of all the means and methods used in the "treatment and prevention of disease, which is the ultimate aim of all medical research."

PHYSICAL DIAGNOSIS

PROFESSOR HOOVER

DRS. OSBORN, MERRIAM, SEASON, MOOREHOUSE, WAGNER, CARTER AND DARBY

Physical diagnosis is taught in the second and third years. During the second year the student is taught to recognize and elicit all of the physical phenomena of the circulatory and respiratory organs and abdominal viscera that are demonstrable by inspection, palpation and auscultation. Pathological cases are shown only as they are found necessary for the demonstration and explanation of physiological signs. At the end of the year each student is required to demonstrate the normal physical signs of the thorax and abdomen. During the third year physical diagnosis is taught from pathological cases. The students are required to demonstrate at every exercise, and are

also given opportunity to practice in the dispensary and hospital wards. The final examination in this course is a practical one. Each student is required to examine a patient, describe the physical signs and make an eliminative physical diagnosis.

THEORY AND PRACTICE OF MEDICINE

PROFESSOR LOWMAN

PROFESSOR SAWYER

DRS. OSBORN, MERRIAM, SEASON, MOOREHOUSE, CARTER AND DARBY

The teaching of medicine is done in the third and fourth years. Lectures, largely clinical, are given to both classes, and the largest possible number of students make direct observation of the patients presented. It is found that very often the whole class can individually verify the conditions described by the lecturer, and this plan has proved of great advantage in the presentation of the cases. The third year class will receive two hours per week in text book work, in which internal medicine not provided for in special departments will be covered in recitation and discussion. The same class has three hours of clinics, and is assigned to the individual study of select dispensary cases. Clinical laboratory drill is made a decided feature of this year's work. In the fourth year the class is taught medicine by clinics, by drill in sections in the dispensary, by the assignment to ward cases, in connection with which the fullest use of the clinical laboratory will be insisted upon. Throughout the course thus outlined, the endeavor is made to develop not only the knowledge of diseases and their diagnosis, but also to thoroughly consider the use of remedies.

SURGERY

PROFESSOR ALLEN

PROFESSOR BUNTS

PROFESSOR CRILE

DRS. BECKER, BRIGGS, HERRICK, LOWER AND BIRGE

Surgery is taught by means of lectures and demonstrations. During the second year two hours weekly, after March 1st, are devoted to the systematic instruction in the application of bandages, splints and in minor surgery. In addition to this the students are given practical drill, in sections, in the application of bandages and splints. During the third year the students receive two hours of lectures weekly upon the principles of surgery, and also section work in Charity Hospital Dispensary. A course of one hour a week is given in the taking of histories, the recording of cases with the surgical literature pertaining to them and in surgical diagnosis. The material

from the dispensary at Lakeside Hospital is used for the latter course. Instruction is given one hour weekly on the subject of fractures and dislocations. There are at least four hours weekly devoted to clinics, and there is instruction of one hour weekly during a period of six months in genito-urinary surgery. A laboratory course has been arranged for instruction in addition to that given during the second year in the course on general pathology.

In this course students are taught to examine blood, and pus, to make cultures, to inoculate animals, to cut sections and make diagnosis of tumors and to perform personally all the laboratory work incident to the diagnosis of surgical cases. This course occupies, in conjunction with a similar course in clinical medicine, from four to six hours weekly during the entire year.

During the fourth year the student attends clinics six hours weekly. After January 1st, there is an additional clinic of one and a half hours weekly, in which instruction is given to sections of from four to six men. Optional clinics are given every Saturday afternoon from the beginning of the term until January 1st at the City Hospital. A course is also given in operative surgery, utilizing all means necessary for the best development of instruction in this department. Throughout the fourth year, also, the student is assigned cases for examination and diagnosis, upon which complete written reports are required. Provision is made in the clinical laboratory for the thorough examination of all of these cases by laboratory methods. The student is required to examine the blood, sputum, urine, fæces, to make sections and diagnosis of tumors and investigate infections, and to make exhaustive reports, under the supervision of especially appointed instructors or demonstrators, which shall be compared with those made by the clinical staff of the various hospitals. In addition to this the class is divided into sections for daily work in the dispensaries. Until January 1st, one hour weekly is devoted to surgical diagnosis. After January 1st this same hour is utilized for the purpose of quizzing the class upon the subjects presented at the surgical clinics. For the purposes of instruction the material is ample, clinics being given at Lakeside, Charity, St. Alexis and the City Hospitals.

OBSTETRICS

PROFESSOR POWELL

DRS. CLARK, THOMAS AND DICKENSON

Instruction in this course begins with the third and continues through the fourth year, two lectures a week throughout each year.

The plan includes didactic lectures, quizzes, practical demonstrations and bedside instruction. Lectures are illustrated freely by charts, diagrams, models and operations upon the manikin. Students are required to become familiar with the use of the various obstetric instruments. The Senior class is divided into small sections and given practical work outside of schedule hours.

Each Senior student is expected to attend from three to five cases of labor under the supervision of the Professor of Obstetrics, or his assistant. The work of the class is chiefly practical.

The work of the Junior class is conducted by Drs. Clark and Thomas. Two hours per week, including recitations from text book and quizzes, are assigned for this purpose.

GYNECOLOGY

PROFESSOR ROBB

PROFESSOR HUMISTON

DRS. THOMAS, SUNKLE, WEIR, POVEY AND WILLIAMS.

Gynecology is taught by a weekly didactic lecture, lasting one hour, and by supplemental quizzes during the third year; through the fourth year two hours a week are devoted to clinical instruction. The patients admitted to the wards of the Lakeside, Charity and City Hospitals for laceration of the perinæum and for vaginal, vesical, uterine, tubal and ovarian disease, will be shown either at the regular clinics in the amphitheatre or will be made the subjects of teaching at the bedside. Instruction will be given in the wards, so far as it is possible, upon the management of such cases during the period immediately following operation and during the period of convalescence. As a rule, each student will have an opportunity of performing some minor operation.

The work in the dispensary at Lakeside and Charity Hospitals will include history-taking and the ordinary methods of examination, the diagnosis and treatment of cases. This instruction is given daily during the school year to the students of the fourth year. For this work the class is divided into sections, so that each student can receive individual attention. Students in turn will be permitted to examine patients, and suitable cases will be operated upon before the class.

DERMATOLOGY AND SYPHILOLOGY

PROFESSOR CORLETT

DRS. HOLE AND GILL

Instruction in this department is given to the third and fourth year classes. Clinical lectures are given once a week to the third year

students during a part of the college year. It is the endeavor to cover the rudiments of dermatology in these demonstrative lectures. When necessary lantern-slide plates and other illustrations are used to further elucidate the subject of diseases of the skin. During the course the class will be quizzed by the assistant in Dermatology.

The Senior class is divided into sections and given practical instruction in the clinics three times a week. Thus the common diseases of the skin, as well as many of the more rare forms, are studied and progress under treatment noted. Ample opportunity is given to apply dressings and each student is called upon to make diagnoses and outline courses of treatment under the immediate supervision of the instructor. Clinical material is abundant.

DISEASES OF THE NOSE, THROAT AND EAR

PROFESSOR INGERSOLL.
PROFESSOR LINCOLN.
DRS. CHAMBERLIN AND ELSON

Didactic lectures on these diseases are given once a week during the third year. Clinical instruction is given during the fourth year and consists in daily work in the dispensary of Lakeside Hospital. Each section of the class is in turn given personal instruction in the use of instruments for examination and operation and also in the diagnosis and treatment of the various cases.

DISEASES OF CHILDREN

PROFESSOR CUSHING
DR. THOMAS AND POPE

The instruction in this course, given in the fourth year, consists of a weekly clinical lecture and recitation, followed by a ward visit. Abundant illustrative material is obtained from the Lakeside Hospital dispensary and the children's ward.

OPHTHALMOLOGY

PROFESSOR MILLIKIN
DRS. BRUNNER, SHACKLETON, LARGE AND COGAN.

The method of instruction is largely clinical with didatic teaching interspersed. It is given to the Senior class. The class is divided into sections, each one being assigned in rotation to cases for examination in the dark room. Each student will be given cases for special study, and is expected to make a report upon them before the class, and will be subject to quizzing by members of the class and the instructor. The aim is to teach the diagnosis and methods of treat-

ment of the external diseases of the eye, and to give a working knowledge of the uses of the ophthalmoscope. The eye department has separate wards in Lakeside Hospital in which students have opportunities for seeing work at the bedside. The class will be divided into sections for instruction with the ophthalmoscope, and for daily work in the dispensary rooms during the year. This department has abundant facilities, appliances and material. A large "dark room" with ten lights, a Javal-Schiötz Ophthalmometer, a perimeter, test cases and ophthalmoscopes for practical ophthalmology are provided. A Haab's magnet has recently been added to the equipment.

NEUROLOGY

PROFESSOR UPSON

DRS. SPENCE AND HUTCHINS

Instruction in this branch of medicine is clinical and occupies one hour a week throughout the fourth year. Cases from the wards of the Lakeside Hospital and from the Neurological Clinic of the Dispensary are used for demonstration. Through the courtesy of Dr. Howard the State Hospital at Newburg is made available, and the class is taken there for study of the typical cases of the various forms of insanity. In addition, the material of the City Hospital is utilized from the beginning of the school year up to January 1 if necessary as a supplementary source of supply. In connection with the cases shown, the class is instructed in the use of the different forms of electric current in diagnosis and treatment, and in other diagnostic methods.

HYGIENE AND PREVENTIVE MEDICINE

PROFESSOR ASHMUN

Hygiene and Preventive Medicine are included in the fourth year, and will occupy two hours a week. In hygiene the course will include consideration of heredity; normal development of individuals and races; climatic and meteorological influences; the essentials and accessories to life and health; effects of habits of life and occupation; individual family and community sanitation.

The course in Preventive Medicine is given by lectures, conferences, theses by students on topics assigned. It includes consideration of the pathology, natural history, channels and means of dissemination, together with methods of limiting the spread of infectious diseases, the duties and powers of public officers of health; value and manner of keeping vital statistics; the relation and duties of the physician to the public in matters pertaining to the public health, etc.

MEDICAL JURISPRUDENCE

Throughout the first half-year, one lecture a week is given to the fourth year class on the subject of Medicine in its relations to the existing laws, and to the various decisions, which are rendered from time to time in important medico-legal cases. Taking up the question of real and apparent death, homicide, wounds, survivorship, identity, the determination of stains, feigned diseases, life insurance, etc., and considering in brief the relationship existing between the law and the practice of medicine.

TEXT-BOOKS

Anatomy—Gray, Morris, Cunningham.

Histology and Microscopical Anatomy—Szymonowicz, or Stöhr.

Comparative Anatomy—Wiedersheim.

Embryology—Heisler, or McMurrich.

Bacteriology—Abbot, Sternberg, Lehmann and Neumann.

Physiology—Practical Physiology by various writers (Arnold, London); for reference, Stewart's Manual, the American Text-Book of Physiology, and Schäfer's Physiology.

Pathology—Delafield and Prudden.

Pharmacology and Materia Medica—Sollmann.

Therapeutics—Wood, Brunton, Bartholow, Shoemaker, Butler, Schmiedeberg.

Medicine—Wood & Fritz, Strumpell, Osler.

Surgery—American Text-book of Surgery, Koenig's Surgery, Warren's Surgical Pathology.

Gynecology—Diseases of Women (Dudley), An American Text-book of Gynecology (Baldy), A Text-book on Gynecology (Reed), Practical Gynecology (Montgomery), Hart and Barbour's Manual of Gynecology. Books of reference, Pozzi, Fritsch, Aseptic Surgical Technique (Robb).

Obstetrics—Williams, Hirst, Jewitt and Edgar.

Dermatology—Crocker, Hardway, Jackson, Morrow's System of Dermatology, Corlett's Acute Exanthemata.

Neurology—Church and Peterson, Dercum, Dana. Books of reference, Gowers, Berkley on Mental Diseases.

Ophthalmology—American Text-book, De Schweinitz, Swanzy, May, Haab's Ophthalmoscopy.

Nose, Ear and Throat—American Text-book, Kyle, Bacon, Buck, Coakley, Grayson, Knight, Dench.

Hygiene and Preventive Medicine—Stevenson and Murphy, Egbert, Abbot.

Physical Diagnosis—Vierordt's Medical Diagnosis.

Diseases of Children—Holt's Infancy and Childhood, Jacobi's Therapeutics of Infancy, Ashby and Wright.

Medical Jurisprudence—Taylor's (A. S.) Medical Jurisprudence, Taylor's (A. N.) The Law in its Relation to Physicians.

EXAMINATIONS, 1904

FIRST YEAR CLASS

Comparative Vertebrate Anatomy—Tuesday, February 9th.
Histology—Friday, May 27th.
Embryology—Saturday, May 28th.
Osteology—Tuesday, May 31st.
Physiology—Wednesday, June 1st.

SECOND YEAR CLASS

Bacteriology—Thursday, June 2d.
Physical Diagnosis—Monday, May 23rd.
Anatomy—Tuesday, May 24th.
Physiology—Practical, Wednesday, May 28, 8 to 11 a. m.; 1 to 4 p. m.
Physiology—Written and oral, Thursday, May 26th, 8 a. m.
Pathological Anatomy—April 6th.
General Pathology—May 27th.
Minor Surgery—Saturday, May 28th.

THIRD YEAR CLASS

Therapeutics—Monday, May 23rd.
Pharmacology and Materia Medica, written and oral, Tuesday, May 24th, 1:30 to 4:30 p. m.
Anatomy—Wednesday, May 25th.
Obstetrics—Thursday, May 26th.
Physical Diagnosis—Thursdays, May 12th to 26th.
Dermatology—Friday, May 27th.
Genito Urinary—Friday, May 27th.
Gynecology—Saturday, May 28th.
Clinical Laboratory—Tuesday, May 31st.
Medicine—Wednesday, June 1st.
Surgery—Thursday, June 2d.
Fractures and Dislocations—Thursday, June 2d.
Pathology—Friday, June 3rd.
Ear, Nose and Throat—Saturday, June 4th.

FOURTH YEAR CLASS

Neurology—Monday, May 23rd.
Obstetrics—Tuesday, May 24th.
Medicine—Wednesday, May 25th.
Physical Diagnosis—Thursday, May 26th.
Ophthalmology—Friday, May 27th.
Jurisprudence, Hygiene and Preventive Medicine—Saturday, May 28th.
Surgery—Tuesday, May 31st.
Pediatrics—Wednesday, June 1st, 2 p. m.
Gynecology—Thursday, June 2d.

GENERAL INFORMATION

TERMS AND VACATIONS

The College session will open on October 1st, each year, unless this date falls on Sunday, in which case the opening shall be on October 2nd.

There will be a vacation of two weeks, during the Christmas holidays. There will also be a vacation of two days preceding Easter Sunday. No College exercises will be held on Thanksgiving Day and the two days following, Washington's Birthday or Decoration Day.

SITUATION OF BUILDINGS

The Medical College stands at the corner of Erie and St. Clair Sts., about five minutes' walk from the center of the city, and easily accessible by the various street car lines.

The Lakeside Hospital fronts on Lake Street, corner of Muirson Street—five minutes' walk from the college. St. Vincent's Hospital (Charity) fronts on Perry Street, corner of Central Avenue. The Home of Maternity is on Woodland and Longwood Avenues. The St. Alexis Hospital is located at the corner of Broadway and McBride Street, and is reached by the Broadway car line. The City Hospital fronts on Scranton Avenue, and is reached by either Jennings Avenue or Pearl Street and Brooklyn cars. The Medical Library building is at 586 Prospect Street.

ENDOWMENTS

This College is indebted to the Perry-Payne Family for the valuable ground upon which its buildings have been erected, as well as for other generous assistance from time to time. In addition there are the following special funds:

The John L. Woods Fund.
The H. B. Hurlbut Fund.
The John Huntington Fund.
The John A. Vincent Fund.
The H. Melville Hanna Fund.
The Leonard Hanna Endowment for the Chair of Clinical Microscopy.
The Henry Wilson Payne Endowment of the Department of Anatomy.
Dr. Adolph Cudell Memorial Library Fund.

It is also under a lasting bond of gratitude and obligation to other generous donors of funds for the erection of buildings, and the endowment and equipment of laboratories and dispensaries, who have permanently increased its resources and advantages to students of medicine.

THE H. M. HANNA RESEARCH FELLOWSHIP

This Fellowship has been founded by Mr. H. M. Hanna for encouragement of research in Physiology and Pathology, and is open to graduates of any medical school.

The occupant of the post will be expected to devote himself to original investigation in Physiology or Pathology in this college under the guidance of the Professor, who shall suggest a subject for research or approve one submitted by the Fellow himself. All applicants must produce evidence of fitness for engaging in such work.

The income of the Fellowship is about $600 a year. It is tenable, in the first instance, for one year, but a Fellow who has done exceptionally good work may be reappointed for a second term.

THE "HENRY WILSON PAYNE DEPARTMENT OF ANATOMY"

At the opening of the college year a sum of $100,000 was donated to the University by Mr. H. Melville Hanna for the endowment of the "Henry Wilson Payne Department of Anatomy." This generous contribution to the college enables it by releasing other funds to apply a considerable amount of

money towards improving the clinical teaching of the school. To this end a number of young men have been appointed to spend a considerable amount of time in the various hospital wards and elsewhere, in drilling the students individually in various departments of medicine. This enables the Faculty to put its clinical teaching on a basis comparable to that heretofore carried out in the laboratory departments.

LIBRARIES

The Free Public Library, over 200,000 volumes; Case Library, 50,000 volumes; Hatch Library, 50,000 volumes, and the library of the Cleveland Medical Library Association are accessible to students of this College, and, with the exception of the Hatch Library, are within a few minutes' walk of the Medical College. By special arrangement of the Faculty members of the Senior class may have the reading privileges of the Medical Library Association's books and journals during the year. This Library now has on its shelves more than 10,000 bound volumes, and one hundred and fifty Medical Journals are on file in the reading rooms. There are more than two hundred volumes of modern text-books and medical works. In addition there is a working library in the College itself, consisting of about 2,500 volumes.

LABORATORIES

Anatomy.—The dissecting room is well lighted with electricity, heated and ventilated and provided with modern appliances. The anatomical rooms have about three thousand square feet of floor space. Anatomical material is preserved at all seasons of the year.

Histology, Comparative Anatomy and Embryology.—The laboratory is well lighted by a north, east and south exposure, and is equipped with electric light for use on dark days. Enough Leitz microscopes are owned so that each student has one for his individual use, available at all times. Individual lockers are provided. The material for study is

furnished without cost to the student. There is a good equipment of microtomes, ovens, glassware, stains and reagents, and a rapidly growing collection of books, charts, models, and demonstration preparations.

BACTERIOLOGY.—The work in bacteriology is carried on in the pathological laboratory. Students are required to provide their own material for drawings. Microscopes, culture media and animals are provided without charge, and material for staining and mounting specimens, to be retained by students at cost. The laboratory has the benefit of excellent lighting with space for individual work.

PHARMACOLOGY.—The laboratories occupy the entire fourth floor of the main building and comprise a large room for lecturing and chemical work, another large room for demonstrations and experimental work, four commodious research rooms, animal and storage rooms, etc. The rooms are excellently lighted, and well equipped for the work, and comprise in all nearly 6,000 square feet.

PHYSIOLOGY.—This is located in a separate building connected with the college building by a gangway. There are three large well lighted rooms with a total floor space of six thousand five hundred square feet. Two of the rooms are set apart for the practical teaching of physiology and are thoroughly equipped for all the details of the course. The third room is for advanced and research work in biochemistry. Besides these laboratories, there are several smaller rooms for private research work and storage purposes, a lecture room, a dark room, a carpenter shop, etc.

PATHOLOGY.—The pathological laboratory occupies the entire east second floor, two thousand four hundred square feet, and has in addition a special room for research work, a museum and a professor's room. The teaching laboratory room affords each student separate locker and ample table space. Apparatus, instruments and teaching material are provided without extra charge.

Besides the College laboratories there is a large three-story pathological laboratory in connection with Lakeside Hospital, and a pathological laboratory connected with Charity, the City and St. Alexis Hospitals, all of which are used for teaching purposes.

Clinical Laboratory.—A clinical laboratory has been completed at Lakeside Hospital, of sufficient size to accommodate an entire class. This provides the students with greatly increased facilities for the examination of secretions and excretions, sputum, purulent and other infections, blood, urine, stomach contents, stools, etc., and permits them to make personal examinations of tumors and other pathological specimens. This work is a part of the regular instruction in the third and fourth years and greatly increases the efficiency with which the clinical work of these years is performed. Microscopes and other instruments are available for the work in this department.

MUSEUMS

Rooms in the College building are set apart for the preservation of anatomical and pathological preparations, casts and specimens. Persons not connected with the College who have specimens they wish preserved can place them in these rooms, with the owners' names attached and such histories, descriptions or remarks as they choose to give, respecting them. A very complete collection of Materia Medica is kept accessible to the students.

HOSPITALS

Lakeside Hospital.—Lakeside Hospital occupies a plot of ground four hundred feet long by three hundred and eighty feet deep, on the bank overlooking Lake Erie, about five minutes' walk from the College building. It affords accommodation for two hundred and fifty patients. The staff is composed of members of the Faculty of this College. The hospital has an amphitheatre seating about two hundred

students for the surgical classes, and a smaller one with a seating capacity of over one hundred for the medical classes. On the third floor of the dispensary building are two lecture rooms, each capable of seating fifty to seventy-five students. There are eighteeen resident assistants for the departments of surgery, gynecology, medicine, ophthalmology, children's diseases, pathology, etc. These positions are open to the graduates of this College, and afford great opportunities for practical work.

There has been erected a pavilion for infections and contagious diseases, having four small wards, with every facility for the proper care and study of these diseases.

St. Vincent's (Charity) Hospital.—This is one of the oldest and best known institutions in the city and state. It has between seventy-five and one hundred beds. The staff is selected by the faculty, and the clinical material of the hospital is utilized for instruction in this College. There are six hospital positions open each year to the graduates of this College.

This hospital has just added a complete new wing for the accommodation of female patients. This has added sixty beds, besides operating pavilion and recovery rooms, to the capacity of this institution. A complete dispensary department is added in the basement of this wing, with all facilities for the care of out-door patients.

St. Alexis Hospital, founded and controlled by the Sisters of St. Francis, contains 275 beds which are mostly occupied by acute cases. The Hospital has lately been very much enlarged by the addition of several modern public and private wards and a small pathological laboratory. Students of this school enjoy the privileges of instruction in the wards and amphitheatres of this hospital. Graduates of this school are eligible to appointment, by competitive examination, to medical, surgical and pathological residentships.

City Hospital.—This institution is under municipal control. It accommodates one hundred and fifty to one hundred and seventy-five patients continually in the adult department and has a new building for children, with one hundred beds, besides operating rooms, pathological laboratory, etc. From September to January regular clinics in medicine, gynecology, surgery, neurology and cutaneous and venereal diseases are given here by members of this faculty. The insane department of this hospital affords material for clinical instruction in mental diseases. Frequent autopsies are held and abundant material for pathological demonstrations obtained. The resident staff is selected by competitive examination, and the students of this College are eligible.

St. Ann's Maternity Hospital and Foundling Asylum.—During 1901 a long desired change was made at the St. Ann's Maternity Hospital and Foundling Asylum. The old institution located on Marion Street was vacated to supply more space to St. Vincent's Hospital. The Severance homestead at the corner of Woodland and Longwood was purchased and remodeled and formally opened to carry on the work in a new location.

St. Ann's Maternity Hospital affords abundant opportunity for the study of the physiology, mechanism and management of labor at the bedside. Graduates of our college are appointed as residents.

CLINICAL FACILITIES

The clinical facilities of this College comprise, throughout the course, the two hundred and fifty beds at Lakeside Hospital, one hundred and forty beds of Charity Hospital, the Dispensaries at Lakeside and Charity Hospitals, nearly three hundred beds of St. Alexis Hospital, the Maternity and Children's Home, and two hundred and seventy-five beds of the City Hospital during four months of each year.

RESIDENT PHYSICIANS

From twenty-five to thirty resident positions are open to the graduates of the College in the hospitals of this city, and additional posts in the hospitals of several cities adjacent to Cleveland. Of the class graduating in 1903, seventeen men received hospital appointments. The large number of hospital and other valuable medical posts assures a high percentage of such appointments from each graduating class.

HOSPITAL SERVICE

LAKESIDE HOSPITAL STAFF

Medicine—Drs. H. H. Powell, J. H. Lowman, H. S. Upson, E. F. Cushing.
Surgery—Dr. D. P. Allen; Dr. G. W. Crile, Associate.
Ophthalmology—Dr. B. L. Millikin.
Gynecology—Dr. H. Robb.
Dermatology—Dr. W. T. Corlett.
Pathology—Dr. W. T. Howard, Jr.

CHARITY HOSPITAL STAFF

Consulting Physicians—Drs. G. C. Ashmun, B. W. Holliday, J. H. Lowman.
Consulting Surgeons—Drs. G. C. E. Weber and D. P. Allen.
Consulting Ophthalmologist—Dr. B. L. Millikin.
Consulting Dermatologist—Dr. W. T. Corlett.
Consulting Gynecologist—Dr. H. Robb.
Visiting Physicians—Drs. J. H. Lee, J. E. Cook, J. P. Sawyer, T. A. Burke.
Visiting Surgeons—Drs. F. E. Bunts and C. A. Hamann.
Visiting Gynecologist—Dr. W. H. Humiston.
Visiting Ophthalmologist—Dr. W. E. Bruner.
Pathologist—Dr. W. T. Howard, Jr.

HOME OF MATERNITY

Obstetrics—Dr. H. H. Powell.

CONSULTING STAFF AT CITY HOSPITAL

Medicine—Drs. J. H. Lowman, J. E. Darby and C. F. Hoover.
Surgery—Drs. D. P. Allen and F. E. Bunts.
Obstetrics—Dr. H. H. Powell.
Neurology—Dr. H. L. Spence.
Gynecology—Dr. W. H. Humiston.
Dermatology—Dr. W. T. Corlett.
Pathology—Dr. W. T. Howard, Jr.
Ophthalmology—Dr. C. C. Stuart.
Laryngology—Dr. J. M. Ingersoll.

VISITING STAFF

Drs. C. A. Hamann and H. G. Wagner.

DISPENSARIES

Free Dispensaries are maintained at Lakeside and Charity Hospitals with daily service except Sundays. These college dispensaries were established on the Hurlbut and Huntington Funds and afford treatment to about ten thousand new cases annually.

LAKESIDE HOSPITAL SERVICE

Medicine—Dr. J. H. Lowman, Director; Drs. E. H. Season, G. W. Moorehouse, E. P. Carter and John C. Darby, Physicians in Charge; Drs. W. S. Hobson and P. W. Cobb, Assistants.

Surgery—Dr. D. P. Allen, Director; Drs. H. A. Becker, Chas. E. Briggs, and R. H. Birge, Surgeons in Charge.

Obstetrics—Dr. H. H. Powell, Director; Dr. J. Dickenson, Jr., Obstetrician in Charge.

Diseases of Children—Dr. E. F. Cushing, Director; Drs. J. J. Thomas, and C. Pope, Physicians in Charge.

Gynecology—Dr. H. Robb, Director; Drs. R. H. Sunkle, W. H. Weir, G. Povey and Charles D. Williams, Gynecologists in Charge.

Nervous Diseases—Dr. H. S. Upson, Director; Dr. H. L. Spence, Neurologist in Charge; Dr. F. C. Hutchins, Assistant.

Ophthalmology—Dr. B. L. Millikin, Director; Dr. W. E. Bruner, Ophthalmologist in Charge; Drs. Wm. E. Shackleton, S. H. Large and J. E. Cogan, Assistants.

Dermatology and Syphilis—Dr. W. T. Corlett, Director and Physician in Charge; Drs. C. M. Hole and W. C. Gill, Assistants.

Diseases of Nose, Ear and Throat—Drs. J. M. Ingersoll and William R. Lincoln, Surgeons in Charge; Drs. Wm. B. Chamberlin and I. A. Elson, Assistants.

CHARITY HOSPITAL SERVICE

Medicine—Dr. J. P. Sawyer, Director; Drs. W. O. Osborne and W. H. Merriam, Physicians in Charge.

Surgery—Dr. F. E. Bunts, Director; Drs. Fred C. Herrick and J. Dickenson, Jr., Surgeons in Charge.

Gynecology—Dr. W. H. Humiston, Director; Dr. O. T. Thomas, Gynecologist in Charge.

Ophthalmology—Dr. Wm. E. Bruner, Director; Dr. C. C. Stuart, Assistant in Charge.

HOME OF MATERNITY

Obstetrics—Dr. Hunter H. Powell, Director; Drs. J. J. Thomas and E. O. Houck, Visiting Obstetricians; Dr. M. Klaus, Assistant.

DISPENSARY AND HOSPITAL APPOINTMENTS.

Students who have completed the third year, remaining in the city during the summer, may be appointed for practical work in the Dispensaries, in sections, by applying to the Dean. Members of the same class may also secure the opportunity for practical work in the various Hospital Wards during the summer.

EXPENSES

The fees are $125 a year. This amount includes payment for tuition and all laboratory expenses, except the price of anatomical material, breakage and use of oil immersion microscopes, and is due before October twentieth of each year. Students who prefer may pay $75 by October twentieth, and $55 by March fifteenth of the college year. No student shall be permitted to present himself for examination in any branch who has not paid all dues and liabilities. Students who wish to pay for the entire four years' course by October twentieth of their first year, will be allowed a reduction of $50 on the whole amount. A deposit of $2 is required from students in each of the laboratories at the outset, in addition to the tuition fee, to cover breakage. The unused balance of such deposit is returned at the end of the session. A rental of $5.00 per year will be charged for the use of oil immersion microscopes, the students having full use of these instruments during their entire year. Students who prefer may furnish their own microscopes.

Students in Adelbert College taking work in the Medical Department will be charged a laboratory fee in each department, the total fees in no case to exceed the difference between the fees of Adelbert College and the Medical College.

Good board can be procured at from three to five dollars a week, and furnished rooms at from five to ten dollars a month. By forming "clubs" students are able to bring their living expenses considerably below these prices. The janitor at the College building keeps a list of boarding houses for the convenience of students. By reason of the central location of the College, together with excellent street car service, students may live in any part of the city without serious inconvenience in meeting their appointments.

The cost of necessary books and instruments will average $25 per year. Thus the total *necessary expense,* including tuition, anatomical material, books, instruments and board and room for the college year, need not exceed $325. The outlay for clothing, traveling expenses and incidentals depends entirely upon the individual.

By an arrangement with Goodrich House, which stands within one block of the College, a gymnasium, with bathing accommodations, is available to the students at a very small cost. At the Y. M. C. A. building, which is near, similar opportunities are afforded. The students of the Medical Department are members of the Athletic Association of the University, and as far as their time will permit may take part in all branches of athletics on equal terms with students of other departments of the University.

POST-GRADUATE AND SPECIAL INSTRUCTION

Courses of post-graduate and special instruction for physicians and special students will be given in the various laboratories, commencing about June 1st and lasting from three to six weeks.

Physiology. Dr. P. W. Cobb. A course of practical physiology, based on the text-book of Practical Physiology used in the regular course. Six half days a week for six weeks. Fee, $20.00. A fee of $5.00 to defray the cost of animals is divided by each set of four.

This course covers the entire work of the first year in the regular class. By taking the course and passing the examination, the student may obtain advanced standing in Physiology. (See p. 15.)

Pharmacology. Drs. T. Sollmann and E. D. Brown. This course will be identical with that given in the pharmacological laboratory during the regular session. It comprises experiments on mammals and frogs, as well as chemical work. Fee, $25.00.

Research work may be begun at any time during the year. No fee is charged to competent investigators, beyond the actual cost of material.

Pathological Anatomy. Dr. John A. Sipher. In this course both gross and histological pathological anatomy will be studied. General problems, such as degeneration and necrosis, inflammation, the infectious granulomota, and tumors will be considered first, after which the special pathological anatomy of the various organs will be studied. The laboratory is well supplied with material for the course, which will be entirely practical, the students doing their own staining and mounting. They will be given such further botanical training as they may desire. The class will meet six half days a week for six weeks. Fee, $30.00.

Clinical Microscopy. Dr. L. W. Ladd. This course will include the various methods of examining blood, sputum, urine, fæces, gastric contents, pathological exudates, and in general, the application of the microscope to the diagnosis and the other aspects of clinical medicine. The class will meet three times a week for a period of two hours each meeting, for six weeks. Fee, $30.00.

Histology and Embryology. Dr. J. B. Austin. Work will be offered to cover part of the laboratory work in each subject and is designed primarily for students who apply for advanced standing, not having completed as much work in these subjects as is done here, and may wish to make up the deficiency in order to enter free of condition in these subjects. The work will be given in the forenoons. Fee $25 for either subject.

For further information apply to the instructors in the various courses.

Graduates in medicine may also arrange for courses of clinical instruction in medicine, surgery and the various specialties during the same period by applying to the Dean of the College, or to the men in charge of the various departments.

PUBLIC LECTURES ON PROBLEMS OF SCIENTIFIC MEDICINE.

The Faculty of the Medical College of Western Reserve University announces the contemplation of a series of advanced lectures on current problems of medical science. It will be the object of each course to take up a circumscribed topic, treating rather exhaustively and critically the special literature, the experimental and clinical data, the theories, current opinions, unsolved problems and the general outlook of the subject. Special stress will be laid on the personal observations of the lecturers, and on the bearing of the results on medical practice.

Each course will consist of eight monthly lectures, delivered at the Medical College, in the hours named below, from October to May inclusive. Three courses are offered for 1904-1905. If sufficient interest is manifested on the part of the profession, it is intended to institute similar courses in future years, altering the topics and lecturers as may be desirable. The fee for each course of eight lectures has been fixed at $5.00; students of the College will be admitted free.

One or all courses will be withdrawn without further announcement, unless sufficient subscriptions are received by June 20th, 1904, to show that the need for this advanced instruction is appreciated. Applications should be sent to Dr. T. Sollmann, at the College.

PROVISIONAL SYLLABUS.

The courses to be offered in 1904-1905 will cover the subjects mentioned below, as far as time will permit. The right is reserved to alter the details.

COURSE I. *Dr. W. T. Howard, Jr.:* TUMORS; THEIR STRUCTURE, HISTOGENESIS, CLASSIFICATION, DISTRIBUTION, AND DIAGNOSIS. ILLUSTRATED WITH GROSS AND MICROSCOPICAL PREPARATIONS.

The third Friday of each month, at 4 P. M.

The course will begin with the study of the anatomical and biological characteristics of the important groups of tumors. Following

this, the origin of tumors will be treated from the embryological, histogenetic, and etiological standpoints; with these as a basis, a system of classification will be indicated. The distribution of the various tumor groups in the human body will then be pointed out. The lectures will conclude with the discussion of the diagnosis of tumors. The course will be made as objective and as practical as possible.

COURSE II. *Dr. J. J. R. Macleod:* Two topics will be treated, about five lectures being assigned to the first, and the balance to the second subject.

The second Tuesday of each month, at 8 P. M.

A. THE FATE OF SUGARS IN THE ORGANISM: THE CHEMICAL PATHOLOGY OF DIABETES MELLITUS.

The digestion and absorption of carbohydrates; glycogenic function of the liver; Bernard's discovery; glycogen in other organs and tissues; fate of glycogen; derivation of glycogen from foods other than carbohydrates; true and pseudo-glycogen builders. The control of the nervous system over the percentage of sugar in the blood; how this percentage is normally kept at a constant level. Experimental diabetes—pancreatic, phloridzin, and other drugs; influence of pancreas on the combustion of sugars. Diabetes mellitus; percentage of sugar excreted with different diets; due to want of decomposition of sugar molecule; evidence of deficient tissue oxidation. Diabetic coma. Remarks on treatment.

B. MODERN VIEWS CONCERNING THE MECHANISMS OF DIGESTION.

General consideration of mechanism of action of the digestive glands; mechanism peculiar to the salivary, gastric and intestinal glands, the pancreas and liver; psychic influences; chemical influences; the inter-relation of the different glands; deglutition; the movements of the stomach and intestines; the absorption of porteids, fats and carbohydrates.

COURSE III. *Dr. T. Sollmann.* THE MECHANISM OF URINE FORMATION, NORMALLY AND IN DISEASE.

The fourth Tuesday of each month, at 8. P. M.

Historical sketch of the theories of urine formation; mechanical factors in urine formation; filtration and circulation phenomena; functions of the glomeruli; of the tubules; reabsorption theories; excretion of the several constituents; occlusion of the ureters; explanation of vital secretion; diuretics; renal poisons; albuminuria; renal glycosuria; diagnosis of urine; uremia; synthetic processes in kidney; internal secretion; nephrotoxic sera; comparative physiology of kidneys in different classes of animals.

APPENDIX

CLASS EXAMINATIONS 1903

VERTEBRATE EMBRYOLOGY

(Write five questions, taking at least one from each group.)

A

1. (*a*) Define briefly maturation, ovulation, fertilization, allantois, chorion frondosum. (*b*) State the fundamental law of biogenesis and cite three phenomena in the embryology of man that coincide with it.

2. (*a*) Give lists of the chief organs arising from each of the three germ layers. (*b*) What is the relation of the coelom to the mesoderm and what are the divisions of the coelom in the adult male?

B

3. Starting with the primary condition of the aortic arches explain the changes by which the adult condition of the large arteries is reached.

4. Describe the symmetrical condition of the venous system and explain the origin of the asymmetrical adult condition.

5. Describe the complete course of the blood, both intra and extra-embryonic, in the fœtus just before birth and the changes which occur at birth.

C

6. Describe the elements in the indifferent internal urinogenital organs, and the changes by which the male and female types arise together with a table of homologies of urogenital organs both internal and external in the two sexes.

D

7. Describe the primary and secondary brain vesicles and the parts of the adult brain arising from each in mammals.

8. Describe the development of the three divisions of the ear, including the ossicles.

BACTERIOLOGY

The examination in this branch was oral and practical, a test tube containing two cultures was given for identification and description.

ANATOMY

Examinations in anatomy are oral.

HISTOLOGY AND MICROSCOPIC ANATOMY

(Answer five questions. Use drawings and descriptions except in 1 and 4.)

1. Identify the ten slides given you. (These were: pancreas, submaxillary, suprarenal, liver, kidney, testis, uterus, urinary bladder, tonsil, cerebrum.)

2. Describe the structure of the tongue.

3. Describe the structure of the duodenum and state chief differences from stomach and colon.

4. Give a list of the different types of epithelia in the uriniferous tubule and urinary tract and locate each sort.

5. Describe the structure of the adult spermatazoan of homo and outline the more important steps in spermatogenesis.

6. Describe the structure of the ripe Graafian follicle and the leading steps in its development.

7. Describe the structure of the skin in any area and note the difference in volar surfaces and in scalp.

8. Describe the structure of the spinal cord in dorsal region, including location of the tracts and neurocyte areas, with relation of their neurons.

9. Describe the finer structure of the coats of the eye in the visual area.

COMPARATIVE VERTEBRATE ANATOMY

(Select five questions.)

1. (*a*) Give the characteristics distinguishing the five classes of vertebrates. (*b*) Define homology and analogy with examples. (*c*) Define diphyodont, chordata, exoskeleton.

2. Describe the elements of the typical vertebrate skull, stating whether paired or single, cartilage or membrane bone.

3. (*a*) Compare the girdles from standpoint of homology. (*b*) Discuss the theories of the origin of paired appendages.

4. Discuss the parts of the vertebrate brain noting the cavities and modifications of the walls.

5. Discuss the respiratory organs of the air-breathing vertebrates.

6. Discuss the heart in the vertebrate series.

7. Describe with diagrams the urinogenital system of an amniote, including the cloaca and ducts.

PHYSIOLOGY

(WRITTEN EXAMINATION)

1. State what you know of the place and mode of formation of the colored and colorless corpuscles of the blood. Describe a method of enumerating them. Under what circumstances do changes in their number occur in health?

2. Describe the various methods of estimating the velocity of the blood. State how and explain why the velocity of the blood varies in different parts of the vascular system.

3. Describe in detail the operation necessary for demonstrating the action of the chorda tympani. What are the effects of stimulating the nerve? What are the effects on the salivary glands of stimulating the cervical sympathetic?

4. Give as full an account as you can of the digestion, absorption and metabolism of fat.

5. How can the velocity of the nerve impulse be measured? What are the proofs that an impulse artificially set up is conducted in both directions along a nerve fibre?

6. Mention the groups of fibres in the internal capsule, their origin, destination and function. What are the histological and physiological effects of destruction of the posterior limb of the left internal capsule?

7. Describe the action of the various extrinsic muscles of the eyeball when they contract singly and in groups. What are the effects of paralysis of the third nerve?

PHYSIOLOGY

(PRACTICAL EXAMINATIONS)

Two of the following experiments were assigned to each student after entering the examination room. The candidate is supplied only with such appartus or reagents as he may ask for.

1. Determine the nature of the coloring matter in solutions A and B. (A was methaemoglobin; B haemachromogen.)

2. Take tracings to demonstrate the action of veratrin on the contraction of skeletal muscle.

3. Determine by Hammerschlag's method the specific gravity of the specimens of blood A and B. (Sp. gr. of A was 1053; of B, 1040.

4. Estimate the amount of urea in the specimen of urine provided.

5. Determine what, if any, pathological substances are present in the specimen of urine provided. (It contained bile pigments and bile acids.)

6. Demonstrate in the frog the phenomenon known as inhibition of the reflexes.

7. Demonstrate on the animal provided the effect of albumoses on the blood pressure.

8. Demonstrate the effect of stimulation of the central end of the sciatic nerve on the blood pressure.

9. Obtain respiratory tracings from the animal provided.

GROSS PATHOLOGICAL ANATOMY

The examination in this branch is oral.

GENERAL PATHOLOGY

An oral examination. The questions included the following subjects: The general principles of pathology, the etiology of infectious and non-infectious diseases, the portals of entrance of microorganisms into the body, the bacterial flora of the body, the bacteria of wound infection, immunity, antitoxins, the etiology and pathological anatomy of typhoid fever, tuberculosis, diphtheria, syphilis, pneumonia, arterio-sclerosis, the pathology of the circulation, etc.

THERAPEUTICS

1. (*a*) Define therapeutics; (*b*) general; (*c*) special; (*d*) rational; (*e*) empyrical; (*f*) natural; (*g*) prophylactic.

2. (*a*) By what methods do antipyreties control temperature? (*b*) Describe the different methods and give examples of each. (*c*) What antipyretic would you suggest in acute rheumatism; (*d*) in pneumonia; (*e*) in typhoid fever?

3. Aconite; (*a*) give active principles; (*b*) preparations; (*c*) dose of each; (*d*) action; (*e*) indications for use. (*f*) Give symptoms and treatment for poisoning.

4. Digitalis: (*a*) give active principles; (*b*) preparations; (*c*) dose; (*d*) action; (*e*) indications for use. (*f*) Name some synergists as heart tonic; (*g*) as diuretic.

5. Veratrum Viride: (*a*) Give active principles; (*b*) preparations; (*c*) dose; (*d*) action; (*e*) therapeutic indications.

6. Arsenic: (*a*) Preparations and dose; (*b*) therapeutic indications.

7. Hyoscyamus: (*a*) Active principles; (*b*) action of each; (*c*) therapeutic indications.

8. Write prescription for (*a*) cholera infantum; (*b*) habitual constipation; (*c*) insomnia from worry.

9. Describe symptoms and treatment for poisoning by (*a*) carbolic acid; (*b*) chloral hydrate; (*c*) opium; (*d*) arsenic; (*e*) strychnia.

PHARMACOLOGY

(WRITTEN EXAMINATION, TIME 2½ HOURS)

1. (*a*) Define: Root, herb, plant-parenchyma, cellulose. (*b*) Describe the process of isolating strychnine from a mixture. (*c*) Write (without abbreviations) a prescription for acute articular rheumatism. The prescription must contain a basis, adjuvant and corrective.

2. (*a*) State the different mechanisms by which cumulative action may be explained. (*b*) Give a rule for calculating doses for children. (*c*) Explain the general procedure by which the site of a stimulation is located.

3. (*a*) Describe the effects of caffein, and (*b*) of strychnia, on the circulation.

4. Summarize the actions of (*a*) morphin; (*b*) aconite; (*c*) digitalis (*d*) ergot.

5. State briefly the therapeutic uses of the drugs enumerated in question 4.

6. Write an essay of about 500 words on the physical basis and the physiologic phenomena of salt action.

7. (*a*) Give the Latin name and dose of specimens 1 to 13. (*b*) State whether the specimens 14 to 20 are correctly labeled.

8. Determine the incompatibilities in the three prescriptions submitted to you.

DERMATOLOGY

1. What is eczema? Give clinical varieties, and distinctive features of each.

2. Outline the treatment of syphilis during its whole course. How long would you treat the disease?

3. Give differentiation between variola and varicella.

4. Give symptoms, pathology and treatment of herpes zoster.

5. Give symptoms, etiology and treatment of scabies. How differentiate from prurigo?

NOSE, THROAT AND EAR

DR. LINCOLN

1. Describe tubercular laryngitis.

2. Describe treatment for chronic pharyngitis.

3. Name the causes of pseudo-membrane in the throat.

DR. INGERSOLL.

1. Discuss atrophic rhinitis.
2. Discuss nasal polypi.
3. Discuss the effect upon the ears of chronic nasal obstruction.

GYNAECOLOGY

THIRD YEAR CLASS

1. What are the different forms of endometritis? How do microorganisms gain entrance to the endometrium and what are the principal forms found in endometritis?
2. Define and give the etiology and treatment of amenorrhoea, dysmenorrhoea, menorrhagia and sterility.
3. Enumerate the different forms of genital fistulae, with etiology and treatment.
4. Differentiate between a myoma of the uterus, an ovarian tumor and an ascitic accumulation, and give the treatment for the several conditions.
5. What is vaginismus? Give the etiology and treatment.
6. Give the etiology and treatment of Bartholinitis.
7. Define prolapsus of the uterus, stating the different forms, etiology and treatment.
8. What is pruritus of the vulva? Give etiology and treatment.
9. What is meant by retroflexion ad retroversion of the uterus? Give etiology, symptoms and treatment.
10. What are the symptoms and physical signs of malignant disease of the uterus and of the cervix? What treatment would you advise? How is the condition to be differentiated from myoma of the uterus?

PRINCIPLES OF SURGERY

THIRD YEAR, 1903.

DR. BUNTS.

1. How are bacteria eliminated from the body? Name the principal pyogenic bacteria.
2. Describe the minute changes which take place in inflammation, terminating in resolution.
3. (*a*) What is gangrene? (*b*) What is ulceration? (*c*) What determines whether gangrene is moist or dry?
4. Define (*a*) sequestrum; (*b*) involucrum; (*c*) caries; (*d*) cold abscess.
5. Give indications for treatment of inflammation.

6. What is traumatic fever? Give its cause. Give prognosis and treatment.

7. What is an aneurysm? What is an active clot? What is a passive clot? Which is most favorable for permanent cure of an aneurysm?

8. Give microbic cause of tetanus, charbon, glanders, erysipelas.

9. How would you treat a lacerated wound?

10. How would you apply moist heat to a wound?

CLINICAL MICROSCOPY

*1. Stain, describe and diagnose the blood smears given you, stating reasons for your diagnosis. Two specimens given each.

2. Describe the method of making a white blood count, stating how you make your dilutions and the various steps you pass through in order to reach the final result. Draw diagrams wherever necessary in order to make your statements plain. Errors to be avoided and which if not avoided would spoil your result. Normal count. Relative percentage of the various kinds of leucocytes in normal blood.

3. Define the terms leucopenia, poikilocytosis, polychromatophilic staining, punctate basophilia.

4. The Widal test—its usefulness as an aid to diagnosis of typhoid fever. How soon is it of value? How long does the reaction last? What amount of time should be allowed for the reaction? What dilutions are used and precautions to be observed in performing the test in order that your results shall be accurate?

5. Give the general characteristics of the urine in the following diseases: Tubercular cystitis, pyo nephrosis, chronic interstitial nephritis, diabetes insipidus.

6. (Given the general characteristics of the urine) what renal condition would you expect to be present from an examination of the given sediment?

MEDICINE

DR. SAWYER

1. Diabetes Mellitus: Give brief account of the (*a*) early symptoms; (*b*) the various pathological conditions present which have been suggested as possible causes; (*c*) the classification of cases; (*d*) the prognosis of each class; (*e*) the complications likely to develop; (*f*) the treatment.

*(1) Pernicious Anemia, (2) Eosinophilia, (3) Lymphatic Leukaemia, (4) Spleno-myelogenous Leukaemia, (5) von Jaksch Anemia, (6) Tertia Malaria, (7) Aestivo Autumnal Malaria. This represents the various kinds of blood given, two different varieties being given to each man.

2. Rheumatism, Acute Polyarticular: Give briefly your idea of (*a*) etiology; (*b*) clinical course; (*c*) complications; (*d*) treatment.

3. Ulcer of Stomach: (*a*) Classify cases; (*b*) give various pathological conditions resulting from or developing out of gastric ulcer; (*c*) give differential diagnosis; (*d*) give treatment.

4. Tuberculosis: (*a*) Give development of tubercular infection. (*b*) What is meant by a "mixed infection," and (*c*) what are its symptoms? (*d*) Give your idea of the prognosis of early cases under favorable conditions, and (*e*) name those conditions and other treatment.

DR. LOWMAN

1. Jaundice: (*a*) Definition; (*b*) Symptoms; (*c*) Distinction between obstructive and toxic jaundice; (*d*) What is grave jaundice? (*e*) Causes of obstructive jaundice? (*f*) Test for bile in the urine and blood.

2. Typhoid Fever: (*a*) What is the diagnostic value of the serum reaction? (*b*) What is the diagnostic value of the diazo reaction? (*c*) Describe the method of making the above tests; (*d*) What is the value in diagnosis of iliac tenderness, chills, hemorrhage, white blood count, temperature? (*e*) What is the peculiar behavior of the tongue, abdomen, bowels, liver, pulse, skin, spleen in typhoid fever? (*f*) State immediate causes of death in typhoid fever.

3. Pneumo-pyo-thorax: (*a*) Differential diagnosis; (*b*) Causes; (*c*) Treatment.

4. Mitral Stenosis: (*a*) What is the form of the heart as outlined by percussion in M.-S.? (*b*) What murmur is present and how is it caused? (*c*) What is the behavior of the heart as to rhythm and force? (*d*) What are some of the remote systemic effects?

5. Rheumatism: (*a*) Name different forms; (*b*) Describe the course of acute articular rheumatism; (*c*) What are the chief dangers and complications? (*d*) Treatment in full.

PHYSICAL DIAGNOSIS

Examination in physical diagnosis is oral and clinical.

SURGERY

DR. ALLEN

1. Indications in detail for treatment of patient in condition of shock, suffering from compound fracture.

2. Palmar abscess. Its diagnosis, dangers and treatment.

3. In infected and suppurating kidney what bacteria may be found? What are the most common? Describe laboratory methods by which two of them may be distinguished.

4. Empyema. Its diagnosis. Its course if unoperated. Indications for and methods of operating.

5. Aneurism. Its varieties. Methods of treatment.

6. Infection of knee joint. Its causes, dangers, treatment and prognosis.

7. Distinguish between syphilis and tuberculosis of the testicle.

8. Hip joint disease. Its diagnosis and treatment in children.

9. Symptoms indicating the presence of gall stones.

10. The treatment of gun-shot wound of the thigh, uncomplicated by fracture with ball remaining in the tissues.

DR. BUNTS

1. Differentiate between fracture of neck of humerus and subcoracoid dislocation.

2. What are the indications for treatment in dislocation? What impediments to reduction may occur in old dislocations?

3. Differentiate between contusion and compression of the brain.

4. Give clinical and histological differences between benign and malignant tumors.

5. Describe (*a*) hip joint amputation; (*b*) amputation at mid-leg; select one. (*c*) Operation for appendicitis; (*d*) operation for inguinal colostomy; select one.

OBSTETRICS

1. Give the differential diagnosis of pregnancy.

2. Give the foetal circulation.

3. Give the diagnosis of the third position of the foetus and the usual mechanism in delivery.

4. Give the management of a breech case without complications.

5. Give the diagnosis and management of inevitable abortion.

6. Give the causes of postpartum hemorrhage.

7. Give the various micro-organisms known to produce puerperal infection, and mention the various forms of infections.

8. Give the forms of pelvic deformities most frequently met with.

OPHTHALMOLOGY

1. Give the symptoms and muscle affected in case of paralysis of the sixth nerve. Same in case of third nerve.

2. Give differential diagnosis between acute conjunctivitis, scleritis, iritis and acute glaucoma.

3. Give indications for use of atropine, homatropine and eserine. Also dose internally of atropine, strychnine, bichloride of mercury and iodide of potash.

4. Give the varieties of ulceration of the cornea. Give full treatment for a perforating ulcer and give its possible sequela.

5. Name the various errors of refraction and give the kind of glass necessary to correct each.

GYNAECOLOGY

FOURTH YEAR CLASS

DR. ROBB

1. Under what circumstances are a dilatation of the cervix and curetting of the uterus indicated?

2. What are the dangers to be avoided in this procedure?

3. Give the palliative operative treatment for cancer of the cervix uteri.

4. Give indications for suspension of uterus and the various steps of the operation.

5. Give etiology of perineal tears with classification and treatment.

6. Under what conditions is a vaginal incision advisable? State the manner of performing the same.

7. What are the causes of prolapsus of uterus and what is the operative treatment?

8. What operation is most suitable for a cystocele? When is it indicated, and how is it performed?

The examinations are partly oral and partly written. The method is to divide the ground covered during the year into about one hundred questions. The class is divided up into ten sections, each of which receives a different set of ten questions, so that as a consequence only two or three men will have precisely the same.

DR. HUMISTON

1. (*a*) What is an erosion of the cervix? (*b*) Differentiate between it and beginning carcinoma.

2. What is gonorrhoeal vaginitis, and how would you treat it?

3. What is a retroversion of the uterus? A retroflexion?

4. Give the indications for curettage.

5. Differentiate between senile endometritis and carcinoma of the uterus.

6. What is an extra uterine pregnancy? Give the symptoms after ruptured tubal pregnancy.

7. Name the tumor formations occurring in the uterus.

8. What is meant by prolapsus uteri?

9. What is a rectocele and what are the determining factors in its causation?

10. Differentiate between a pregnancy of five months gestation and a fibroid of the uterus whose growth would equal the size of the former.

PEDIATRICS

1. Diet lists for a child at 18 months and at 2½ years. Diet for the first days of an attack of gastro-enteritis in infancy.

2. Symptoms and treatment of congenital heart disease.

3. Symptoms and differential diagnosis of tubercular meningitis.

4. Detail of treatment, isolation and disinfection in scarlet fever.

NEUROLOGY

1. What are the causes of facial paralysis?

2. Describe the ocular symptoms of tabes dorsalis.

3. Give the symptoms of melancholia.

4. What are the causes of drop-wrist, and how is it tested electrically?

5. How should epilepsy be treated?

HYGIENE AND PREVENTIVE MEDICINE

1. Give the measures which can be taken to prevent and limit the spread of scarlet fever.

2. Give the time of incubation in small-pox.

3. What are some of the channels by which the typhoid bacillus gains entrance to the body?

4. How would you manage a case of diphtheria to prevent others from having it?

5. How would you determine water to be safe to drink?

ALUMNI ASSOCIATION.

The annual meeting of the alumni of Cleveland Medical College and the Medical Department of Western Reserve University will occur June 15th, 1904, in the college building, corner of Erie and St. Clair streets.

This will be the sixtieth commencement of the Medical College and the alumni are urged to be present and make this meeting an unusually successful one.

Class reunions will be held at 4 p. m. at the college building. The business meeting of the Alumni Association will be held at 5 p. m. The alumni dinner (complimentary) will be given at 6 p. m. Clinics and laboratory demonstrations will be given during the day at Lakeside Hospital and on the morning of the following day at Charity Hospital.

OFFICERS OF THE ASSOCIATION 1903-4.

JOHN M. INGERSOLL, M. D., Cleveland, ... President.
A. C. MATTHIAS, M. D., McComb, O., ... 1st Vice-President.
CHARLES V. GARVER, M. D., Lorain, O., . . . 2d Vice-President.
G. C. ASHMUN, M. D., Cleveland, O., ... Recording Secretary.
WILLIS S. HOBSON, M. D., Cleveland, . . Corresponding Secretary.
L. A. WHEELOCK, M. D., Cleveland, ... Treasurer.

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